

UNIVERSIDADE DE LISBOA
FACULDADE DE LETRAS
DEPARTAMENTO DE LINGUÍSTICA GERAL E ROMÂNICA



**WH-CONSTRUCTIONS IN CAPE VERDEAN CREOLE:
EXTENSIONS OF THE COPY THEORY OF MOVEMENT**

NÉLIA MARIA PEDRO ALEXANDRE

DOUTORAMENTO EM LINGUÍSTICA
(Linguística Geral)

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Tese orientada por:
Inês da Silva Duarte (Professora Catedrática, FLUL)

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Abbreviations

ACC	Accusative
Adj(P)	Adjective (Phrase)
Adv(P)	Adverbial (Phrase)
Agr(P)	Agreement (Phrase)
AgrSP	Subject Agreement Phrase
ASP	Aspect
AUG	Augmentative
AUX	Auxiliar
BNP	Bare Noun Phrase
BP	Brazilian Portuguese
CL	Clitic
CLLD	Clitic Left Dislocation
COMP	Complementizer
COND	Conditional
CP	Complementizer Phrase
CVC	Cape Verdean Creole (variety of Santiago Island)
CVC_B	Cape Verdean Creole (variety of Barlavento ‘windward’)
DEF	Definite
DEM(P)	Demonstrative (Phrase)
DET/D(P)	Determiner (Phrase)
DIST	Distal
DM	Distributed Morphology
DO	Direct Object
DOC	Double Object Construction
ECP	Empty Category Principle
EP	European Portuguese
EPP	Extended Projection Principle
EXPL	Expletive
F	Feminine
FI	Full Interpretation
FOC	Focus
FocP	Focus Phrase
FP	Force Phrase
F(PP)	Pied-piper Feature
iF	Interpretable Feature
I/K	Individual/Kind
IMP	Impersonal
INFL	Inflection
INT	Interrogative
IO	Indirect Object
IP	Inflection Phrase
IPFV	Imperfective
LBC	Left Branch Condition

LCA	Linear Correspondence Axiom
LF	Logical Form
Lin	Linearization (DM)
M	Masculine
MOD	Modal
MozP	Mozambique Portuguese
MP	Minimalist Program
NEG	Negation
NegP	Negation Phrase
NOM	Nominative
NONCL	Non-clitic
NSL	Null Subject Language
OBJ	Object
OBL	Oblique
Op	Operator
PASS	Passive
PF	Phonological Form
PFV	Perfective
PIC	Phase Impenetrability Condition
PL	Plural
POSS	Possessive
PP	Preposition Phrase
Prep	Preposition
<i>pro</i> -drop	Null subject
PROGR	Progressive
PROX	Proximal
PST	Past
QP	Quantifier Phrase
REL	Relative clause
RP	Resumptive pronoun
SBJ	Subject
SC	Small Clause
SG	Singular
Spec	Specifier
SV	Subject-Verb order
TMA	Tense-Mood-Aspect
TOP	Topic
TopP	Topic Phrase
TP	Tense Phrase
<i>u</i> F	Uninterpretable Feature
<i>val</i>	Valued
VS	Verb-Subject order
Wh-	Interrogative or relative elements started by ‘wh-’
1	first person
2	second person
3	third person

Abstract

This dissertation concerns two types of wh-constructions – interrogative and relative clauses – of Cape Verdean Creole (CVC), a Portuguese-based Creole language spoken on the archipelago of Cape Verde, specifically the variety spoken on Santiago Island, in the coast of West Africa.

Chapter 2 focus on some aspects of the syntax of CVC, claiming that the possibilities of S-V inversion are very limited and that verbs stay in V°, except for the Present tense form of the copula verb *e* ‘to be’, which is the spell out of the formal feature [Present] of T. It is proposed that CVC exhibits a clause functional structure that is similar to English: [CP [TP [NegP [AspP [VP ...]]]]]. In this chapter, it is also suggested that a non Split-CP, based on the formal features [\pm D, \pm V, \pm Q, \pm Wh, \pm T], correctly accounts for the distribution of the complementizers in CVC.

Chapter 3 presents the wh-question formation strategies exhibited by CVC, showing that some of them involve Move, while others do not. Considering CVC data, it is said that the language has two clausal typing processes: an ambiguous complementizer *ki* ([\pm Q, \pm Wh]), whose checking domain is strictly local; and an unambiguous complementizer \emptyset ([+Q, +Wh]), whose checking domain is not strictly local. The first one derives fronted wh-questions and the second one accounts for wh-in-situ.

Chapter 4 describes the relativization strategies displayed by CVC, focusing on the fact that PP pied-piping is ruled out and that resumption is possible both inside and outside syntactic islands. It is suggested a revision of Bianchi’s (2002a) head raising analysis for the structure of relative clauses.

Chapter 5 discusses the properties of the defective copy strategy ([wh]_[+PL] ... el]) and presents evidence in favor of a distinction between this type of wh-strategy and resumption ([wh]_[+PL] ... es]). It is argued that the language requires an overt pronominal form (3SG) to occur in the complement position of the preposition because CVC types the clause with a complementizer *ki* [μ Cat +D] and does not allow for preposition incorporation. The set of formal features of the lower copy is ‘shrunked’, i.e. the features are deleted but not erased, being accessible to PF. This analysis of the defective copy

strategy predicts that it only applies to PPs and that it is an autonomous process involving wh-movement, which is distinct from resumption.

Keywords: Cape Verdean Creole (CVC), wh-questions, relative clauses, complementizers, ‘defective copy’, resumption.

1. Introduction

This dissertation is the result of research into wh-questions and restrictive relative clauses of Cape Verdean Creole. These two types of wh-constructions will be analyzed in chapters 3. and 4., respectively, following an overview of those aspects of the syntax of Cape Verdean Creole that are relevant to my research, which are discussed in chapter 2. In chapter 5., the analyses of interrogative and relative clauses will lead me to propose a mechanism of ‘defective copying’ that accounts for one particular type of strategy found in this language: namely, “preposition stranding with a spelled out trace”.

In the present chapter, I will introduce some information on the language that is the scope of this study, the variety taken into consideration, and the name that I will use for the language (section 1.1.); I will provide the way I collected the data and a general survey of the language data sources used in this dissertation (section 1.2.); I will briefly present the framework I adopted in this research (section 1.3.); and I will present the outline of the dissertation (section 1.4.).

1.1. The language under study: Cape Verdean Creole

The language that is the scope of this dissertation is Cape Verdean Creole (CVC hereafter), a Portuguese-based Creole language spoken in the islands of the Republic of Cape Verde by almost 400.000 speakers (cf. www.ethnologue.com) and by more than 500.000 speakers in the diaspora (mostly in Brazil, France, Germany, Italy, Portugal, Senegal, Spain, and United States of America). Albeit CVC words are mainly derived from Portuguese, several West African languages, such as Wolof, Fula (or Pulaar) and Mandinka¹, strongly influenced CVC formation and are nowadays some of its substrate languages.

In order to avoid heterogeneity due to dialectal variation, the scope of this study will be the variety of Creole spoken in Assomada, Santa Catarina, an inland district of

¹ These are languages that belong to the Niger-Congo family, mainly spoken in Senegal, Gambia, Guinea-Bissau, Mali and Mauritania.

Santiago Island (cf. Map 1.), where Creole is taken to be more basilectal, as the speakers say: *di badiu di pe ratxadu*.

Map 1. Assomada, Santa Catarina district, Santiago Island, Cape Verde



Source: (<http://portuguese.noscasacv.com/contentpage.aspx?tabId=126>)

Santiago Island was the first to be discovered (in the 15th century), but, as far as we know, the earliest records of written CVC date back to the second half of the 19th century (cf. Coelho, 1880; J. Costa & C. Duarte, 1886; and Brito, 1887, republished in a 1967 collection edited by J. Morais-Barbosa). Portuguese is currently still the only official language of the Republic of Cape Verde, although an orthographic convention called *Alfabeto Unificado para a Escrita do Crioulo Cabo-verdiano* (ALUPEC) was officially tested for a period of five years (1998-2003) and became the official orthography of the Cape-Verdean language (vd. Appendix I, Decree-Law n°67/1998 and n° 8/2009).

According to Brüser & Santos (2002), the formation of the Santiago variety of CVC must have began in the first decades of the Island discover and, therefore, this variety of the Cape Verdean Creole is one of the oldest European-based creoles still

alive. CVC lost contact with the substrate languages, but maintained contact with Portuguese, for political imposition from Portuguese colonization until 1975.

The grammar descriptions that were published by the end of the 19th century follow the model of prescriptive grammars. We have now the means to analyze CVC with the theoretical apparatus of explicit theories such as those developed within the research program of Generative Grammar. The interest on the study of CVC is, thus, related to the fact that, on one hand, Creoles in general have been understudied for centuries and only recently (in the second half of the 20th century) some in-depth research has been done; and, on the other hand, because Creoles are, after all, so ‘rich’ as any other language, in the spirit of DeGraff (2001b and 2003) and against McWhorther (2001), who stands for a different perspective.

Following Muysken (1977), I claim that the grammar of Atlantic creoles (and of CVC in particular) are “assumed to be the product of a compromise between specific African and specific European language structures, mediated through the psychological processes of second language learning and the specific capacities of grammar construction” (p. 81).

Regarding the language name, recently some scholars have recently suggested *Kauberdianu* (cf. Quint-Abrial, 1998; Mendes et al., 2002; Pratas, 2002 and 2007; Cardoso, 2005; Baptista, Mello & Suzuki, 2007). Nevertheless, throughout this dissertation I will use the autoglossonym *Kriolu* (translated into ‘Creole’ of Cape Verde), because it is the name that the native speakers identify themselves with, and because it is also officially established (cf. Decree-Law n°67/1998, Appendix I: 1).

Finally, I support the claim made in Decree-Law n°8/2009 (cf. Appendix I: 14) according to which the Republic of Cape Verde must “devise a language policy that allows the Creole to share with Portuguese the status of official language”. However, I do not think that the research presented here brings any immediate benefit to CVC speakers or even to the Republic of Cape Verde. But I strongly believe that it can be used to create the necessary conditions to teach *Kriolu* in Cape Verde, being a further contribution to the process of CVC officialization that began in 1998 with the ALUPEC. Perhaps CVC speakers, who are very proud of their mother tongue but fiercely defend Portuguese as their prestige tongue (cf. Sanches, 2005, A. Costa, 2006), will be aware that the language that they speak since the cradle has a very dynamic and eclectic grammar.

1.2. Methodological issues

The present research on *wh*-constructions in CVC is based on a vast amount of empirical data (i) which have been collected during field sessions with native speakers that were temporarily living in Portugal (undergraduate and graduate students) and with native speakers from the Santa Catarina district on Santiago Island (cf. Map 1. above); and (ii) which were selected from CVC written materials (books, articles, linguistic studies).

First, it must be noted that the examples of my corpus will generally follow ALUPEC's rules², but in this dissertation some examples are presented in distinct orthographic solutions, namely those cases that are taken from other sources, respecting the authors' original options.

The sessions with native speakers temporarily living in Portugal consisted of elicited data and grammaticality judgment tasks. My primary consultants were Arlindo Costa (Assomada, Santa Catarina), José Maria Moreno (São Lourenço dos Órgãos, Santa Cruz) and Catarina Oliveira (Berço, Santa Catarina), while my secondary consultants were Jeremias Fernandes (Assomada, Santa Catarina), Ermelinda Furtado (Achada Além, Santa Catarina), Emanuel de Pina (Boa Entradinha, Santa Catarina); Antónia Varela (Praia); and Virgílio Varela (Assomada, Santa Catarina).

The fieldwork done in Cape Verde took place in February 2005 and 2006. Again, all my consultants are mainly from Assomada, the capital of Santa Catarina district. During the first period in Cape Verde, I asked my informants to tell the story of their lives, which were digitally tape-recorded. The tape-recordings of Ti Betu (Picos, Santa Catarina); Mirlina Correia (Assomada, Santa Catarina); Ilídia Fortis (Achada Além, Santa Catarina); Landu (Engenhos); Eloisa Mendes (Picos); Gil Moreira (Boa Entradinha, Santa Catarina); Maria Nascimento (Gil Bispo, Santa Catarina); and Vitalina (Achada Além, Santa Catarina) were partially transcribed into the CHILDES program (CHAT and CLAN, at (<http://childes.psy.cmu.edu/>)).

This kind of work was very useful, albeit not directly employed in this dissertation, because it allowed me to understand that the kind of relative clauses I wanted to look at (those involving PPs and islands) are not frequent in spontaneous speech (the most productive ones were/are, as in other languages, subject and (direct)

² I will diverge from ALUPEC not using an accent mark in words whose stressed syllable is the penultimate, e.g.: ALUPEC form *ómi* will be written as *omi*.

object relative clauses) and that wh-questions rarely occur in this type of task. This made me understand that grammaticality judgment tasks were crucial to get the data I needed. So, during the second fieldwork trip to Santiago, I conducted two grammaticality judgment tasks built with more than one hundred (130) wh-questions and with two hundred (200) relative clauses, controlling such variables as grammatical relation of the wh-elements, animacy, number marking (on the head noun in relative clauses and on the ‘doubling’ pronoun), wh-movement tests, D-linked vs. non D-linked wh-constituents, etc. (see Appendix II).

These tasks were submitted to the following native consultants: Agnelo Almeida (Ito, from Bulanha, Santa Catarina); Mirlina Correia; Gil Moreira; Maria Moreira (Boa Entradinha, Santa Catarina); Daniel Spínola (Danny, Assomada, Santa Catarina); and Adalberto T. Varela (Boa Entradinha, Santa Catarina). Since the results of this task exhibited some variation in the responses, the same set of wh-questions and relative clauses was submitted to the grammaticality judgment of native speakers living in Portugal, namely, Arlindo Costa, José Moreno and Catarina Oliveira, in order to clear some persisting doubts and to refine some tests³ (see Appendix III for the results of the grammaticality judgment tasks of all the consultants).

Concerning the written data, CVC has sporadically been used for written purposes since late 19th century by poets and journalists. This kind of data support were important to make sure that the strategies found in the oral data I had collected were not just oral phenomena, in the frontier of linguistic variation, but a well established property of the language. Therefore, whenever pertinent, I will use the following written sources of Santiago variety:

- T.V. da Silva (1985, 1987, 1998, 2004, 2005)
- Kaká Barboza (1996)
- Horácio Santos (1999, 2000)
- Humberto Lima (2000)
- Danny Spínola (2004)
- Lúkas (2004)
- Manuel Veiga (2005)

³ This kind of work was also very important because it allowed me to fill the gaps of the elicited data in the grammaticality judgment tasks, hereby significantly increasing the corpus.

The dictionaries listed below were also used as sources of written data:

- Nicolas Quint-Abril (1998)
- Mafalda Mendes; Nicolas Quint-Abril; Fátima Ragageles & Aires Semedo (2002)
- Martina Brüser & André dos Reis Santos (2002)

There are also several linguistic studies on CVC (variety of Santiago) that I want to highlight for their pioneer work on the study (of the grammar) of this language and whose examples I will occasionally refer to:

- Adolfo Coelho (1880/1967)
- Joaquim Botelho da Costa & Custódio Duarte (1886/1967)
- Manuel Veiga (1982, 2000)
- Marlyse Baptista (1999, 2002, 2004, 2007)
- Fernanda Pratas (2002, 2007)
- Nélia Alexandre & Nuno Soares (2005)

Finally, the glosses of the data used in this dissertation follow “Leipzig Glossing Rules: conventions for interlinear morpheme-by-morpheme glosses”, developed by Bernard Comrie and Martin Haspelmath of the Department of Linguistics of the Max Planck Institute for Evolutionary Anthropology (2004).

1.3. Theoretical framework

Some scholars claim that “Creole languages in general tend strongly to be less complex than older languages” (McWhorter, 2001: 134), while others remark that Creoles are only superficially simple, for “a number of transformations which are crucially dependent upon the previous (cyclical) application of agreement and concord transformations cannot apply” (Muysken, 1977: 80), which is a symptom that syntactic structures are more complex than what they seem a priori.

The goal of this dissertation is to present an analysis for the wh-interrogatives and restrictive relative clauses in CVC. As I will argue in the next chapters, this Creole language displays several possibilities of interrogative and relative clause formation and

is as ‘simple’ or as ‘complex’ as any other language. Although CVC may present some similarities with related languages (especially with substrate and superstrate), the crucial point to be highlighted here is that such strategies are related to the specific parameterization of some principles of UG in CVC grammar.

The analysis of the wh-constructions of CVC presented in this dissertation is conducted within the framework of the Generative research Program, essentially within the Theory of Principles and Parameters (Chomsky, 1986) and the Minimalist Program (Chomsky, 1995b and thereafter). I believe that those approaches are of great importance for Creole studies, especially because it allows us to look at Creole languages without historical or sociolinguistic prejudices, i.e., this theoretical framework treats all languages alike, with structures that are reflections of the human language faculty, without the need to fall back on the grammar of the substrate languages or the one of the superstrate languages.

1.4. Outline of the dissertation

The wh-constructions of CVC investigated in this dissertation have been very superficially addressed in previous work, and almost always considering the Portuguese paradigm as a descriptive model. The prime goal of the research developed here is to explain the mechanisms of one process involved in wh-question and relative clause formation: the preposition stranding with a spelled out trace strategy. In order to achieve that goal, I will first describe and analyze each type of clause.

Given that wh-questions and relative clauses interact with several topics in the clause structure, in Chapter 2 I will examine the functional structure of CVC (verb movement, DP structure and pronominal and complementizer systems) based on earlier proposals. In fact, in the last few decades, the tense and aspectual systems of CVC have been fairly well studied (see Veiga, 1982 and 2000; Silva, 1985; Suzuki, 1994; Baptista, 2002; and Pratas, 2007). Some of those authors propose that AgrP and TP are projected in the functional structure of the CVC clause and that the verb moves to T° (cf. Baptista, 2002), while others suggest that the verb never goes out of VP, because the functional heads that can adjoin to T° (such as Asp° and Neg°) account for the linear order. I will suggest, instead, that CVC has no verb movement to T° because of the word order

between the verb and negation markers, adverbs and floating quantifiers. However, I will assume that NegP and AspP project and that the copula verb *e* ‘to be’ in its Present tense form (*e*) is merged in T°, spelling out the [Present] feature of T.

Further in Chapter 2, I will show that in CVC the pronominal complements selected by prepositions (nonclitic forms) are distinct from the pronouns selected by verbs (clitic forms), which means that Case is active. It will be also shown that wh-constituents such as *ken/kenha* ‘who’, *kusé* ‘what’ and *ki N* ‘which N’ occur obligatorily with an overt complementizer *ki* whose formal features must be checked through a Spec-head relation with those wh-elements in SpecCP. Considering the DP structure of CVC, in section 2.4., I will propose a non-Split DP, where [Number] is a formal feature of D° and [Gender] is lexically marked. At the remainder of the chapter, I will propose a feature-based analysis of the elements that occur in C° in CVC, against a Split-CP hypothesis.

In Chapter 3, I will first describe the several types of wh-question strategies that CVC exhibits, such as the strategies of (i) null gap; (ii) null gap with PP pied-piping; (iii) preposition stranding with a spelled out trace; (iv) P-chopping; (v) wh-in-situ; and (vi) resumption, which occurs exclusively inside syntactic islands. Based on the data, I will then show that the language has two clausal typing processes: movement of a wh-operator to SpecCP and A'-binding between a null complementizer merged in C° and a wh-in-situ.

In Chapter 4, I will present the relativization strategies that CVC displays for restrictive relative clause formation, such as (i) null gap; (ii) preposition stranding with a spelled out trace; (iii) P-chopping; and (iv) resumption, focusing on the fact that PP pied-piping is rejected in this kind of construction. I will also show that Bianchi’s (2002a) raising analysis correctly accounts for the strategies of null gap and preposition stranding with a spelled out trace, but that it cannot distinguish resumption from the latter strategy. Therefore, I will diverge from Bianchi’s approach taking resumptive pronouns to be part of the initial Numeration as autonomous categories.

In Chapter 5, capitalizing on the observations made in the previous chapters for the wh-constructions studied in this dissertation, I will focus on one particular wh-strategy: preposition stranding with a spelled out trace. The main goal of this chapter is to distinguish this strategy from resumption. At surface, they are both very similar, since they yield syntactic objects that end up with a 3rd person pronominal form. Based on the

Copy Theory of Movement (Chomsky, 1995b) and the Copy + Merge Theory of Movement (Nunes, 2004), I will suggest a ‘defective copy theory’ that will adequately account for the ‘defective copy’ that results from the preposition stranding with a spelled out trace strategy, setting it apart from the resumptive pronoun that occurs in nontrivial chains that are the output of resumption.

Chapter 6 will present a general synthesis of the research findings and discuss implications for further investigation.

2. Aspects of the Syntax of Cape Verdean Creole

2.1. Introduction

The syntax of *wh*-constructions in CVC, specifically that of relative clauses and *wh*-questions, is not a topic that has received much attention despite the fact that these constructions are central in the grammar of any language, since they supply important syntactic and semantic information (on word order and the possibility of *wh*-movement¹, and on how reference is set between dislocated or distant elements). For this reason, and before discussing the properties of those constructions, it is necessary to address some aspects of the grammar of this Creole language that directly interact with the *wh*-constructions in focus here. In particular, I will briefly review the functional structure of CVC clauses and the issue of verb movement, the pronominal system, the DP structure and the complementizers system, based on the assumptions made in the relevant literature of CVC², and I will discuss some of the proposals that have been made so far for the language.

2.2. Clause functional structure and verb movement

CVC is an SVO language, exhibiting an almost exclusive S(subject)V(erb) pattern, also in *wh*-questions, as (1) illustrates.

- (1) a. [DO Kusé] ki [SBJ katxor] [V kume]? OK_{SV}
thing that dog eat(PFV)
'What did the dog eat?'

¹ See, for instance, Greenberg's (1963) linguistic universal number 12, as in (i):

(i) "If a language has dominant order VSO in declarative sentences, it always puts interrogative words or phrases first in interrogative word questions; if it has dominant order SOV in declarative sentences, there is never such an invariant rule."

² Vd. Baptista (1995, 2002 and 2007), Veiga (2000), Pratas (2002 and 2007), Castro & Pratas (2003), Costa & Pratas (2004), Alexandre & Soares (2005), a.o.

- b. *[_{DO} Kusé] ki [_V kume] [_{SBJ} katxor]? *VS
 ‘What ate the dog?’³

However, it is possible to find CVC sentences that exhibit VS order, particularly with specific verb classes. If the subject (SBJ) is indefinite, it can stay in the internal argument position of unaccusative verbs (cf. (2)), but it cannot occur in post-verbal position in sentences with unergative verbs (cf. (3)).

- (2) a. Undi ki [_V more] [_{SBJ} un santxu]? ^{OK}VS_[-def]
 where that die(PFV) a monkey
 Lit.: ‘Where did die a monkey?’
- b. Undi ki [_{SBJ} un santxu] [_V more]? ^{OK}SV
 ‘Where did a monkey die?’
- c. Ki dia ki [_{SBJ} Nhu Ntoni] [_V more]? ^{OK}SV
 which day that mister Ntoni die(PFV)
 ‘In which day did Mr. Ntoni die?’
- d. *Ki dia ki [_V more] [_{SBJ} Nhu Ntoni]? *VS_[+def]
 which day that die(PFV) mister Ntoni
 Lit.: ‘In which day did die Mr. Ntoni?’
- e. *Ki dia ki [_V txiga] [_{SBJ} mininus]? *VS_[+def]
 which day that arrive(PFV) boys
 Lit.: ‘In which day did arrive the boys?’

³ Note that the counterpart in EP is grammatical (cf. (i)), contrary to what Ambar (1992) proposes.

(i) O que é que comeu o cão?
 the what is that eat(PFV) the dog
 Lit.: ‘What is that eat the dog?’

According to Ambar (id.), the SBJ-V inversion exhibited in EP wh-questions is due to V-to-C movement. In (i), however, C° is occupied by a focus element (*é que* ‘is that’), which blocks V-to-C movement. We may assume that this suggests that the order of constituents in this sentence is independent of V-to-C movement (see Costa, 1998, for a similar analysis applied to declarative embedded sentences in EP, as in *O Paulo disse que comeu a Maria a sopa* / Lit.: ‘Paulo said that ate Maria the soup’).

- (3) a. Undi ki [_{SBJ} uns mininu] [_V badja]? ^{OK}S_[-def]V
 where that a.PL boy dance(PFV)
 ‘Where did some boys dance?’
- b. *Undi ki [_V badja] [_{SBJ} uns mininu]? *VS_[-def]
 Lit.: ‘Where did dance some boys?’

As (2) and (3) show, VS order in CVC is sensitive both to the verb class and to the ‘definiteness effect’⁴.

In sentences with a copula verb, as in (4), the subject can stay in situ, i.e. inside the small clause (SC) selected by it, yielding the VS order, and the definiteness effect does not obtain.

- (4) a. Undi ki [_{SBJ} bu libru] [_V sta]? ^{OK}SV
 where that POSS.2SG book be(IPFV)
 Lit.: ‘Where your book is?’
- b. Undi ki [_V sta] [_{SC} [_{SBJ} bu libru]]? ^{OK}VS
 ‘Where is your book?’

The behavior exhibited above is not exclusive of wh-questions, though. In declarative sentences, CVC also presents SV word order, as shown in (5)-(8), allowing for VS only when the subject is indefinite and occurs in a unaccusative construction, as shown in (6c.).

- (5) a. [_{SBJ} Djon] dja [_V kume] katxupa. ^{OK}SV
 Djon already eat(PFV) katxupa
 ‘Djon already ate the katxupa.’
- b. *Dja [_V kume] [_{SBJ} Djon] katxupa. *VS
 ‘*Already ate Djon the katxupa.’

⁴ See Costa & Pratas (2004: 128).

- (6) a. [_{SBJ} Djon] dja [_V txiga]. ^{OK}S_[+def]V
 Djon already arrive(PFV)
 ‘Djon arrived.’
- b. *Dja [_V txiga] [_{SBJ} Djon]. *VS_[+def]
 ‘*Arrived Djon.’
- c. [_V Txiga] [_{SBJ} uns artista plástiku]. ^{OK}VS_[-def]
 arrive(PFV) a.PL artist plastic
 ‘There arrived some painters.’
- (7) a. [_{SBJ} Uns mininu] ta [_V badja]. ^{OK}SV
 a.PL boy IPFV dance
 ‘Some boys dance.’
- b. *Ta [_V badja] [_{SBJ} uns mininu]. *VS
 Lit.: ‘Dance some boys.’
- (8) a. [_{SBJ} Nha fidju-femia] [_V sta] na Portugal. ^{OK}SV
 POSS.1SG son-female be(IPFV) in Portugal
 ‘My daughter is in Portugal.’
- b. Na Portugal [_V sta] [_{SBJ} nha fidju-femia]. ^{OK}VS
 Lit.: ‘In Portugal, is my daughter.’

Sentence (8) and the wh-question in (4) above show that there are two possible word orders in CVC in sentences that involve locative constituents. In fact, Levin & Rappaport (1995: 218) consider that a construction involving locative inversion presents a non-canonical order of constituents (PP V DP) that seems to be the output of an interchange between the DP and PP from the order DP V PP. According to these authors, the PP typically conveys locative information and occurs preverbally. Thus, (8) is a case of locative inversion that is also found in languages which are not Null Subject Languages (NSL). Compare, for instance, EP (a NSL) examples (9) and (10) with the grammatical English counterparts.

- (9) a. [_{SBJ} Os Rolling Stones] [_V estão] em Lisboa. ^{OK}SV EP
 DET Rolling Stones be(IPFV) in Lisboa
 ‘The Rolling Stones are in Lisbon.’ English
- b. Em Lisboa [_V estão] [_{SBJ} os Rolling Stones]. ^{OK}VS EP
 ‘In Lisbon are the Rolling Stones.’ English
- (10) a. [_{SBJ} O Pedro] [_V mora] em Telheiras⁵. ^{OK}SV EP
 DET Pedro live(IPFV) in Telheiras
 ‘Peter lives in Telheiras.’ English
- b. Em Telheiras [_V mora] [_{SBJ} o Pedro]. ^{OK}VS EP
 ‘In Telheiras lives Peter.’ English
 (adapted from Duarte, 2003: 547)

Note also that Lopes-Rossi (1993), based on Old Portuguese data, shows that VS word order was predominant in *wh*-questions of Brazilian Portuguese (BP) until the 19th century. According to this scholar, VS word order is now a very restricted phenomenon, almost exclusive of copula verbs⁶. E. Duarte (1992, ap. Kato et al., 1996: 346), in her diachronic study of BP *wh*-questions, argues that the change from VS to SV order in BP may be due to the occurrence of the emphatic expression *é que* ‘is that’. Kato et al. (1996: 355) suggest, however, that SV order is not obligatory in the presence of *é que*, as sentences like (11) (with a locative complement) show.

- (11) De onde **é que** [_V vem] [_{SBJ} esse bom senso]? BP
 of where be that come(IPFV) DEM good sense
 Lit.: ‘From where comes that good sense?’
 ‘Where does that good sense come from?’
 (adapted from Kato et al., 1996: 357)

⁵ According to Duarte (2003: 548), verbs like *morar* ‘to live’ select for a SC formed by a locative predicate and a nominal subject. The difference between these verbs and the copula verbs lies in the fact that the nucleus of the SC has to be locative.

⁶ Duarte (2000) refers that the same situation is observable in EP, but at a different pace, and that the VS word order is increasingly less used in oral speech.

Considering the data presented so far, table 1. summarizes the SV order possibilities in CVC, stressing the fact that inversion is allowed (but not obligatory) only in sentences with unaccusative verbs + SBJ_[-definite] or with copula verbs.

Table 1. Word order in declarative clauses and wh-questions in CVC

	Declarative clauses and wh-questions				
	Transitive	Unergative	Unaccusative V		Copula V
	V	V	SBJ _[+def]	SBJ _[-def]	
SV	+	+	+	+	+
VS	-	-	-	+	+

2.2.1. V-to-T movement in CVC (Baptista, 2002)

The facts summarized in table 1. rise the two following questions about the syntax of CVC:

- (12) a. Given the fact that it allows VS order in declarative sentences, is this Creole a Null Subject Language?⁷
- b. Does verb movement apply in declarative clauses and in wh-questions in CVC?

Traditionally, the diagnosis for verb movement is the position of the verb with respect to negation, adverbs and floating quantifiers. More specifically, a certain language exhibits overt verb movement if the verb shows up to the left of the negation markers, adverbs or floating quantifiers (see Pollock, 1989, and Costa 1998, for EP, a.o.).

According to Baptista (2002), in CVC verbs move to T because adverbs and floating quantifiers can show up to the right of the verb (cf. (13) and (14), respectively).

⁷ As I will not address this topic here, I refer the reader to Baptista (1995 and 2002: section 8.9), Pratas (2007: chap. 5) and Costa & Pratas (2008), on the status of CVC with respect to the typology of Null Subject Languages.

- (13) João [_V prende] ([_{Adv} **ben/mal**]) se lison ([_{Adv} **ben/mal**]).
 João learn(PFV) well/bad POSS.3SG lesson well/bad
 ‘João learnt his lesson well/badly’.

(adapted from Baptista, id., p. 185-6)

- (14) Konbidadu [_V txiga] [_{Adv} **todos**] na mismu tenpu.
 guest arrive(PFV) all in same time
 Lit.: ‘The guests arrived all at the same time’.

(adapted from Baptista, 2002: 147)

As Baptista uses sentences with monosyllabic adverbs, as *ben* ‘well’ and *mal* ‘badly’, which can occur either to the right of the verb or in clause final position, I add another example in (15), where the adverb *txeu dimás* ‘too much’ seems to behave like *ben/mal*⁸.

- (15) a. Maria [_V gosta] di música [_{Adv} **txeu dimás**].
 Maria like of music too much
 ‘Maria likes music too much.’

- b. Maria [_V gosta] [_{Adv} **txeu dimás**] di música.
 Lit.: ‘Maria likes too much of music.’

Nevertheless, if we employ the adverb *txeu dimás* ‘too much’ with a non-stative verb, like *odja* ‘to see’ in (16), the only position available for it is the final one.

⁸ Loureiro & Pratas (2003, ap. Pratas, 2007) consider the distribution of *txeu* in a sentence like (i), but they treat it as a modifier (more precisely, a quantifier) of the DP *pexi* and not as an adverb.

(i) N ta [_V kumeba] [_{DP} [_{Qt} **txeu**] pexi].
 1SG TMA eat a.lot.of fish
 ‘I used to eat a lot of fish’.
 (adapted from Pratas, 2007: 197)

Although this is correct for (i), in the examples (15), in the text, *txeu dimás* has undoubtedly an adverbial reading.

- (16) a. *Nha Dona ta [_V odja] [_{Adv} **txeu dimás**] si
 POSS.1SG grandmother IPFV see too much POSS.3SG
 fidju ki sta na Portugal.
 son that be in Portugal
 Lit.: ‘My grandmother sees too much the son that she has in Portugal.’
- b. Nha Dona ta [_V odja] si fidju ki sta na Portugal [_{Adv} **txeu dimás**].
 ‘My grandmother sees the son that she has in Portugal too much.’

And the disyllabic adverb *sabi* ‘well’ has the same behavior (see (17)).

- (17) a. *Kes mininu-li ta [_V papia] [_{Adv} **sabi**] ingles.
 DEM boy-PROX IPFV talk well English
 Lit.: ‘These boys speak well English’.
- b. Kes mininu-li ta [_V papia] ingles [_{Adv} **sabi**].
 ‘These boys speak English well’.

Sentences (15)-(17) lead us to conclude that, in CVC, stative verbs like *gosta* ‘to like’ in (15) overtly move, while non-stative verbs like *odja* ‘to see’ or *papia* ‘to talk’ in (16) and (17) do not allow for overt movement. However, we may consider a possible contrast between stative verbs that select for Oblique PPs, as *gosta* ‘to like’ in (15) above, and stative verbs that select for Direct Object DPs, as *ten* ‘to have’ and *kre* ‘to like’, with respect to the distribution of adverbs, as shown in (18)-(19)⁹.

- (18) a. Bu xefi [_V tene] dinheru [_{Adv} **txeu dimás**].
 POSS.2SG boss have(IPFV) money too much
 Lit.: ‘Your boss has money too much.’
- b. *Bu xefi [_V tene] [_{Adv} **txeu dimás**] dinheru.
 ‘Your boss has too much money.’

⁹ See Costa (1998), who already discussed a similar contrast in English.

- (19) a. Maria [_V kre] si maridu [_{Adv} **rei di txeu**].

Maria like POSS.3SG husband very of much
 ‘Maria likes her husband very much.’

- b. *Maria [_V kre] [_{Adv} **rei di txeu**] si maridu.

Lit.: ‘Maria likes very much her husband.’

Confronting the sentences in (15) with those of (18) and (19), we observe that verbs like *gosta* allow for the order V+PP+Adv (15a.) and V+Adv+PP (15b.), while verbs like *ten* or *kre* only allow for the order V+DP+Adv, where the adverb occurs rigidly in a post-object position.

In the light of this data, we see that there is an asymmetry between stative verbs that select for PP complements (as *gosta* ‘to like’) and stative verbs that select for DP complements (as *ten* ‘to have’ and *kre* ‘to like’), thus, we may conclude that CVC stative verbs that select for a Direct Object DP do not move overtly, behaving in this respect like the non-stative verbs.

In what concerns floating quantifiers, Baptista (2002) assumes that they are a good diagnosis for V-to-T movement in CVC because they can occur in a post-verbal position (as in (14) above). We may assume, however, that in (14) the verb *txiga* ‘to arrive’ did not move over the subject, and that it was part of the QP subject (namely, the DP *konbidadu*) that moved to clause initial position, leaving the quantifier *tudu* ‘all’ stranded in its original position, as an internal argument (see (14) repeated here as (20)).

- (20) [_{DP} Konbidadu]_i txiga [_{QP/SBJ} ~~tudu~~ [_{konbidadu}]_i] na mismu tenpu.

In fact, if we apply this test of floating quantifiers to sentences with transitive verbs (cf. (21)), as Pratas (2002 and 2007) also suggests, we conclude that a verb as *kunpra* ‘to buy’ cannot move over the subject *tudu mudjeris* ‘all the women’, irrespective of the aspectual or temporal information on the sentence¹⁰.

¹⁰ Note that in CVC the opposition perfective (PFV) / imperfective (IPFV) or past / present translates into \emptyset / *ta*.

- (21) a. [QP **Tudu** [DP mudjeris]] (ta) kunpra ropa nobu.
all women PFV/IPFV buy cloth new
‘All the women bought/buy new clothes’.

b. [QP [DP Mudjeris]_i **tudu** [~~mudjeris~~]_i] (ta) kunpra ropa nobu.
Lit.: ‘The women all bought/buy new clothes’.

c. #[DP Mudjeris]_i (ta) kunpra [QP tudu [~~mudjeris~~]_i] ropa nobu¹¹.
Lit.: ‘Women bought/buy all new clothes’.

Notwithstanding these facts, monoargumental verbs (unergative and unaccusative verbs) pattern alike, since both unaccusative verbs like *txiga* in (11) and unergative verbs like *badja* ‘to dance’ in (22) and *fuij* ‘to run away’ in (23) can occur to the left of floating quantifiers as *tudu* ‘all’¹².

- (22) Konbidadus ta [V badja] [Adv **tudu**] na festa di Djuana.
guests IPFV dance all in party of Djuana
Lit.: ‘The guests dance all at Djuana’s party’.

- (23) Kántu soldádus di rai txiga, trópas inimigu [V fuij] [Adv **tudu**].
when soldiers of king arrive(PFV) troops enemy run.away(PFV) all
Lit.: ‘When the king’s soldiers arrived, the enemy troops run away all’.
(adapted from Brüser & Santos, 2002: 257)

¹¹ The sentence *Mudjeris ta kunpra tudu ropa nobu* is grammatical only if it is interpreted as ‘The women buy all the new clothes’, in which *tudu* as scope over *ropa nobu*. This is not the intended reading, though.

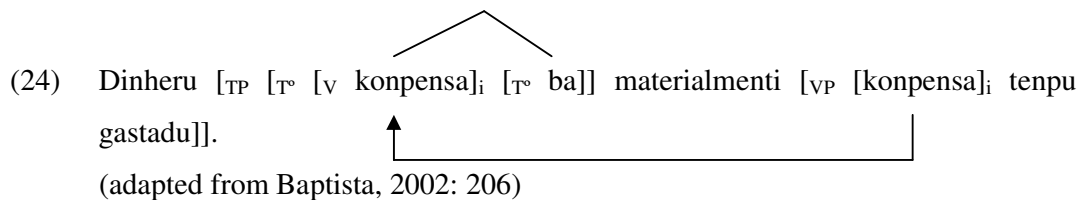
¹² In fact, it could be said that CVC does not exhibit a clear cut distinction between unaccusative and unergative verbs, given that typical unergative verbs display some of the properties of the unaccusative ones, as the grammatical use of the participle form of *fuij/fuxi* in a predicative construction as (i) illustrates.

(i) a. Kes ómis la sta **fuxidu** di kadiâ, pulisia sa ta djobe-s.
DEM men DIST be run-away.du of prison police PROGR look-3PL
Lit.: ‘Those men are escaped from prison; the police are looking for them.’

b. Dja N ten tres dia **fuxidu** di kása di nha mai.
already 1SG have(IPFV) three day run-away.du of house of POSS.1SG mother
Lit.: ‘I have already three days away from my mother’s house.’
(both from Brüser & Santos, 2002: 229)

The data with floating quantifiers in (21)-(22) show that there is a distinct distribution between different verbal classes: monoargumental verbs as *txiga* ‘to arrive’ in (20) and *badja* ‘to dance’ and *fui* ‘to run away’ in (22)-(23) only apparently precede the quantifier (i.e. the QP/SBJ is probably generated as their internal argument and it is the DP part of the QP that moves over the verb), while bi-argumental verbs like *kunpra* ‘to buy’ in (21) cannot precede the quantifier *tudu*.

Baptista (2002: 185) does not use the negation test for verb movement because, according to her, “lexical verbs always occur in a post-Neg position”. But she presents another piece of evidence for overt V-to-T movement, namely, the inflectional anterior marker *-ba*. In CVC, *-ba* is the only verbal suffix of the language, which spells out T°; therefore the verb moves up to T and the linear order V+*ba* obtains, as in (24), where the V *kompensa* ‘compensate’ adjoins to *-ba* in T° moving over the adverb *materialmenti* ‘materially’.

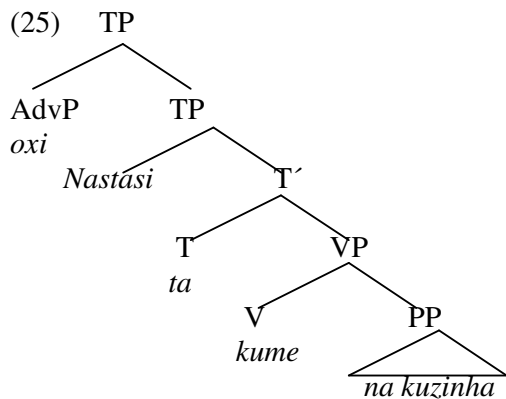


The discussion of the facts on negation and about Baptista’s proposal of *-ba* in T°, triggering overt V-to-T movement, will be delayed to section 2.2.3., where I propose that the verb does not move out of VP in CVC using some arguments distinct from Pratas (2007).

2.2.2. “An almighty TP”: absence of V movement in CVC (Pratas, 2007)

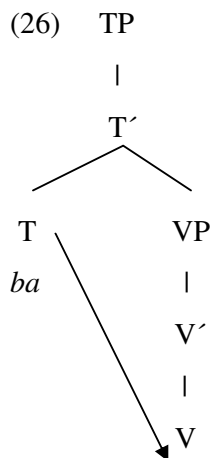
Pratas (2007) argues against Baptista’s (2002) proposal of V-to-T movement based on the possibility of quantifier floating with transitive verbs, as shown in (21), and assumes that CVC does not exhibit overt movement of the verb to T. In fact, she argues that this language does not allow overt verb movement at all.

Pratas proposes the IP domain contains only the functional node T and that all TMA morphemes and negation adjoin to T°, while the verb stays in V°, as in (25).



(from Pratas, 2007: 130)

The only possible counterexample to her analysis, as Pratas assumes, is the behavior of suffix *-ba* in CVC. Inspired in Bobaljik's (1995) proposal for suffix *-ed* in English, Pratas suggests that "postverbal *-ba* involves lowering of *-ba* to the verb"¹³ (id., p. 200), as in (26).



Assuming this post-syntactic rule of lowering, Pratas accounts for the required adjacency between *-ba* and the verbal root, namely, she accounts for the ungrammaticality of sentences that involve *-ba* and the object clitic *-l*, as in **Djon odjaba-l* 'Djon used to see him/her', instead of the grammatical *Djon odjaba el*. Pratas further claims that this lowering operation is morpheme-specific and targets also the passive markers *-du* and *-da* of CVC.

¹³ A proposal already made in Costa & Pratas (2003).

Note that under the Distributed Morphology (DM) framework, the operation of Lowering applies at PF before linearization “under structural adjacency” (cf. Halle & Marantz, 1993: 134) and is defined as in (27).

Lowering

- (27) “[Movement operation at PF that] lowers a head to the head of its complement”.
(Embick & Noyer, 2007: 319)

Assuming the strict locality requirement, Pratas can only account for the occurrence of aspectual markers between the tense affix *-ba* and the verb, as in *N ta kumeba ...* ‘I had eaten ...’, where T and V are not clearly adjacent, if all functional morphemes are merged in T, as she claims.

I will suggest, however, that CVC clause structure projects a functional Asp node and that the relation between *-ba* and the verb it adjoins to can be accounted for by other mechanisms, respecting the strict locality requirement between the two elements, and without resorting to PF movement operations of lowering.

2.2.3. No verb movement in CVC

Having reviewed the two main proposals on verb movement in CVC (within the MP framework), the goal of this section is to propose a non-verb movement analysis in CVC based on motivation distinct from Pratas (2007). The first point I want to make is that CVC, being a Portuguese lexically-based Creole language, does not seem to pattern alike with EP with respect to verb movement, at least verbs do not move as freely as in EP (which can end up in C^{o14}).

The second point I want to make is that the focus of this dissertation is not the temporal-aspectual system of CVC, and therefore I will not extensively discuss this topic¹⁵. I will just take as a fact that CVC seems to have aspectual markers (e.g., *ta* for imperfective, \emptyset for perfective, *sa ta* for progressive, etc.)¹⁶ and a temporal marker *-ba*

¹⁴ On this topic, see Ambar (1992 and thereafter), Costa (1998), Duarte (2000) and Soares (2006).

¹⁵ See Veiga (1982 and 2000), Silva (1985), Suzuki (1994), Baptista (2002), and Pratas (2007), just to name the most recent works on clause structure, irrespective of their theoretical assumptions.

¹⁶ These are elements that place the temporal information of predicates into a given perspective. See Hagemeijer (2007: 132) for some tests that help us to determine the status of aspectual markers in Santome. The aspectual markers of CVC seems to behave alike, exhibiting a similar functional behavior, as in (i)-(v):

(for anterior or past tense)¹⁷. Following Comrie's (1976) observations on aspect and time systems of West-African languages, Hagemijer (2007: 144) assumes that "the concept of aspect in a language such as Santome is especially hard to dissociate from tense". Such an observation could be used to argue in favor of a functional category T that also encodes aspect. Despite that, I will assume that the aspectual markers listed above for CVC (*ta*, \emptyset , *sa ta*) head the functional node AspP¹⁸, following Cinque (1999), Aboh (2004) and Hagemijer (2007), who claim that each aspectual marker heads an independent AspP.

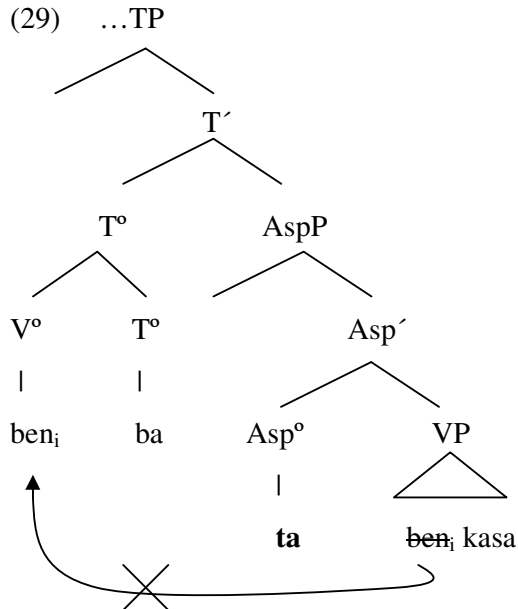
The tense marker *-ba* is still a mystery, though. If we follow Baptista (2002) analysis, saying that CVC allows for overt V-to-T movement and that *-ba* is a temporal marker generated under T^o, we could not account for the ungrammaticality of a sentence like (28), where the aspectual marker *ta* intervenes between T and V, blocking the linear order [V+*ba*], as (29) partially represents.

(i)	*Rua ta baridu linpu. street IPFV swept clean 'The street was cleaned.'	<u>Participle construction</u>
(ii)	*Maria ta [linpa sapatu] _i ku graxa, mas Djon nau ta [-] _i . Maria IPFV clean shoe with grease but Djon no IPFV 'Maria cleans the shoes with grease, but Djon doesn't.'	<u>VP-ellipsis</u>
(iii)	Q: Maria ta linpa sapatu ku graxa? Maria IPFV clean shoe with grease 'Did Maria clean the shoes with grease?' A: Aian, e ta *(linpa). yes 3SG IPFV clean 'Yes, she does'.	<u>Question-answer pair</u>
(iv)	[_{VP} Linpa sapatu ku graxa] e kusa ki Maria ta *(fase). clean shoe with grease be thing that Maria IPFV do 'To clean the shoes with grease is what Maria does'.	<u>VP-fronting</u>
(v)	*Maria ta kuazi linpa sapatu. Maria IPFV almost clean shoe 'Maria has almost cleaned the shoes.'	<u>Adverb placement</u>

¹⁷ It seems that in Santome *tava~ta* exhibits the same behavior as CVC *-ba*. Hagemijer (2007: 145) suggests that "the past marker *tava~ta* is actually the only core TMA-marker that is prominently tense-oriented" and I believe that this is also true for *-ba* in CVC.

¹⁸ I am aware of the discussion around the label that these aspectual markers should receive (e.g., Asp or vP), but I will not make a stand on this topic. Instead, I refer the reader to Borik (2002) and references therein.

- (28) *La pa banda sinku ora di tardi, e **benba** **ta** kasa.
 there to around five hour of afternoon 3SG come(PST) IPFV house
 Lit.: ‘Around five o’clock, he come used home’.
 ‘Around five o’clock, he used to come home’.



As we can see in (29), within Baptista’s proposal, the verb *ben* ‘to come’ cannot head-adjoin to the temporal suffix *-ba* across the aspectual imperfective marker *ta*.

Note first that *-ba* is suffixal in CVC¹⁹, but it occurs as a free morpheme in other creole languages. For instance, in Kriyol, *ba* occurs freely after the verb (cf. Kihm, 1994), and pre-verbally in Santome (cf. *tava~ta*, Hagemeijer, 2007) and in Papiamentu (cf. *tabata*, Maurer, 1988).

In fact, Kihm (1994: 104) claims that “**ba** cannot be analyzed as a verbal affix in Kriyol, since it would not impede the adjacency requirement for the pronoun if it was one”, as shown in (30).

¹⁹ Louisiana Creole also displays a past tense suffix on the verb *-e*, as in the verb *mōzh* ‘to eat’ in (i):
 (i) Na lōtō mo pa **mōzhe** gratō. Louisiana Creole
 PRS for a long time I NEG eat cracklin
 ‘I haven’t eaten cracklin for a long time.’
 (Rottet, 1992: 277, ap. Baptista, 1999b: 10)

- (30) a. N konta u **ba** kuma nya pirkitu karu de. Kriyol
 1SG tell 2SG PST that POSS.1SG parrot expensive DE
 ‘I had told you though that my parrot is expensive.’
- b. *N konta **ba** u.
 1SG tell PST 2SG
 ‘I used to tell you.’
 (adapted from Kihm, 1994: 99 and 104)

The behavior of *ba* in Kriyol is the opposite of what we observe in CVC, where the adjacency between the verb and *-ba*, even when object pronouns are present, is obligatory, as in (31).

- (31) a. N kontab**a** bu.
 1SG tell(PST) 2SG
 ‘I used to tell you.’
- b. *N **konta-u** **ba**.

Considering these facts, I propose that the Anterior/Past form *-ba* occurs in T°, specified for the formal feature [Past], and is subject to Lasnik’s (1999) “stranded affix” filter²⁰, according to which an affix must be attached to a host. This filter applies at the interface between syntax and phonology requiring that the affix *-ba* hops to its verbal host²¹ and the [Past] feature in T is checked through long-distance agreement against the goal V, as in (33) for sentence (32).

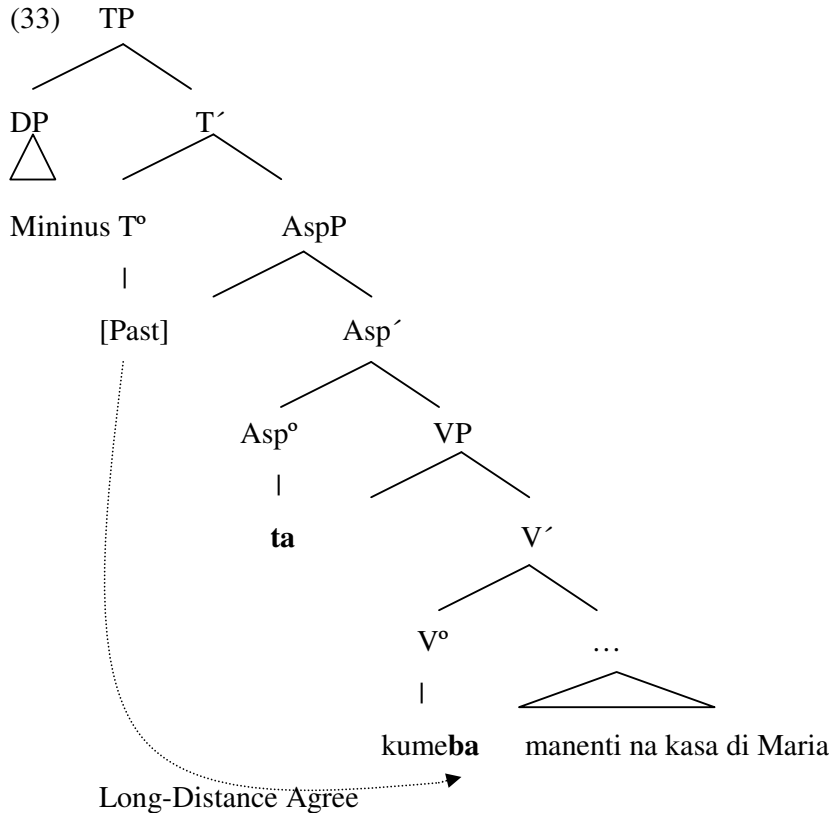
²⁰ The constraint is established in the following terms:

The “Stranded Affix” Filter

(i) “A morphologically realized affix must be a syntactic dependent of a morphologically realized category, at surface structure”.
 (Lasnik, 1999: 98)

²¹ See Hagemeijer (2007: 96) for the discussion on the absence of verb movement with *be* in Santome. Particularly, the author claims that the prosodically marked occurrence of the adverb in final position in *be* sentences may suggest that “there is a post-syntactic reordering going on at PF. This is particular appealing in a language with a rigid syntax above V (i.e., no verb movement, base-generated TMA-markers, etc.)”.

- (32) Mininus **ta** kume**ba** manenti na kasa di Maria.
 boys IPFV eat(PST) frequently in house of Maria
 ‘The boys used to eat in Maria’s house frequently.’



In (33), the imperfective marker *ta* heads the functional Asp° node, intervening between T° and V° , and the functional category that conveys [Past] (T°) checks its past tense feature against V° through a mechanism of long-distance agree as suggested in Chomsky (2001)²², yielding *kumeba* at PF.

The position of the negation in the clause structure has also been used to diagnose verb movement. Baptista (2002: 185) says that this test does not apply to CVC because *ka* ‘no’ always precedes the verb. Only the copula verb *e* ‘to be’ constitutes an exception to this order.

²² According to Chomsky (2008), long-distance agreement accounts for the relation between a probe and a goal, irrespective of their moved or in situ version.

In fact, *e* is always followed by *ka*, except when the verb assumes the explicit [Perfective] form *era* ‘was’ (which is also an exceptional case in this creole²³), as in (34).

(34) a. Djon *e/*era ka* bunitu.
 Djon be NEG pretty

b. Djon *ka era/*e* bunitu.

Both: ‘Djon is/was not pretty’.

Pratas (2007) suggests that this order between the negation marker and the copula verb *e* is an argument for not projecting the functional layer NegP, and for the adjunction of *ka* to T°. The copula verb *e/era* also adjoins to T° since, according to Pratas (id., p. 126), it “bears no meaning other than temporal information”. Furthermore, Pratas argues that the linear order between *e/era* and *ka* depends on the morpho-phonological weight of the copula verb.

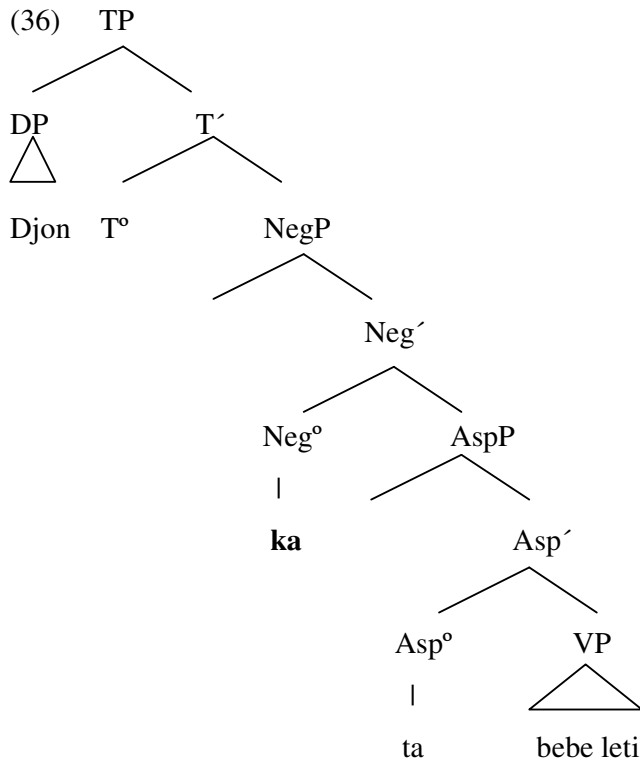
Nevertheless, it seems that the negation marker *ka* can independently support a non-verb movement analysis. Based on CVC data, I take Neg to project as an independent functional category in this language, occurring above AspP but below TP, as in (36) for a sentence like (35).

(35) Djon *ka ta bebe* leti.
 Djon NEG IPFV drink milk
 ‘Djon doesn’t drink milk’.

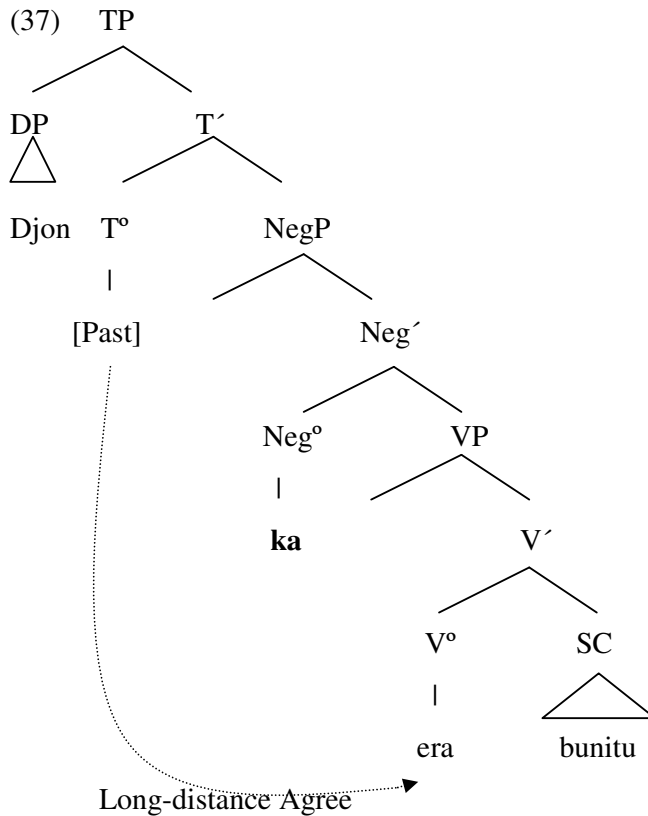
²³ There are also some records of *binha* ‘used to come’ and *tinha* ‘used to have’, instead of *benba* and *tenba/teneba*, as in (i)-(ii).

(i) Tudu sabru *e ta baba* Somada *e ta binha/benba* noti dentu.
 every Saturday 3SG IPFV go(PST) Somada 3SG IPFV come(PST) night inside
 ‘Every Saturday, s/he went to Somada and s/he used to come late at night’.

(ii) Si *tenba/tinha* bádjú, *e ka ta perdeba* el.
 if have(PST) party 3SG NEG IPFV lose(PST) 3SG
 ‘If there was a party, s/he didn’t lose it’.



In (34b.), the copula verb *era*, usually considered a temporal marker (namely [Past], see Baptista, 2002 and Pratas, 2007 above), occurs after *ka*. To assume that *era* is a temporal marker that occurs under T° implies that a sentence like **Djon era ka bunitu* ‘Djon wasn’t pretty’ should be grammatical. In the sequence of what I have proposed for the past tense suffix *-ba*, I will suggest that *era* should be taken as a (crystallized) past form. Particularly, the verb *e* ‘to be’ only occurs in the form of the past tense *era* when T° bears a [Past] feature, checking it through long-distance agree and obtaining the linear order, as (37) shows.



Note further that *era* is incompatible with the imperfective marker *ta*, as in (38a.), and cannot co-occur with the other overt past marker *-ba*, as (38b.). These facts are additional evidence in favor of *era* as a crystallized tense morpheme.

- (38) a. *Djon (ka) **ta** **era** bunitu.
 Djon NEG IPFV be pretty
- b. *Djon (ka) **eraba** bunitu.
 Djon NEG be(PST) pretty
 Both: 'Djon wasn't pretty.'

However, observing (34a.) above, in which the copula verb occurring in the form of *e* 'to be' is interpreted as a Present tense 'is' and the negation marker *ka* obligatorily follows it, is puzzling.

In this case, I assume that *e* is the expression of the [Present] feature in T°, i.e. *e* is not a verb per se and its presence in a sentence only marks (Present) tense. The fact that CVC displays copulaless constructions feeds this suggestion. More specifically, as

shown in Baptista (2004), CVC allows for “negative adjectival or possessive predicates and affirmative/negative passives” with copula drop, as illustrated in (39).

- (39) a. Bo bu ka dodu. Adjectival predicate
 2SG 2SG NEG crazy
 ‘You are not crazy.’
- b. Bu ta dadu gran di sal. Affirmative passive
 2SG IPFV give.du grain of salt
 ‘You are given a grain of salt.’
 (adapted from Baptista, 2004: 104 and 106)

Copulaless constructions are inclusively found with Locative predicates in interrogative sentences, as (40) illustrates, stressing on the fact that the wh-word *undi* ‘where’ phonetically contracts with the 3SG nonclitic pronoun *el*, which means that there is no V° projection between them.

- (40) Ki dia ki nu ta ba und’el?
 which day that 1PL IPFV go where-3SG
 Lit.: ‘Which day do we go where s/he?’
 ‘When do we go to visit him/her?’

This kind of verbless sentence is a syntactic feature of several Slavic languages, especially Russian²⁴, which presents an opposition between overt Past copula and absent Present copula, as in (41).

- (41) Misha eto (byl) / Ø nash doctor. Russian
 Misha DEM (be.PFV) / Ø POSS.1PL doctor-NOM
 ‘Misha was / is our doctor.’
 (adapted from Markman, 2008: 366)

²⁴ According to Kopotev (2007: 120), who presents historical data from Russian and Finnish supporting the copula ellipsis, copulaless constructions were already available in Old Russian, which constitutes a “crucial sign of long-term changes leading to a complete rebuilding of the Russian verbal morphology and to the appearance of new syntactic models.”

But this type of construction also occurs in languages other than Slavic. According to Pustet (2003), who investigates about 150 different languages, in many languages which have a copula, the copula can be freely omitted or, in some specific grammatical environments, it must be absent²⁵.

Just like Russian, Hebrew also does not show a Present tense copula form, while the Past tense copula is represented by the verb *h.y.y*, as in (42b.):

- (42) a. Dani (hu) ha – more. Hebrew
 Dani 3SG the teacher
 ‘Dani is the teacher.’
- b. Dani **haya** nexmad ad meod.
 Dani be.PFV nice very
 ‘Dani was very nice.’
 (adapted from Doron, 1983: 70 and 72)

Therefore, to take *e* as the expression of Present tense falls in a more general linguistic typology that is further supported by the fact that this verb form, contrary to all other verbs, can occur in an infinitival form, as in (43a.) contrasting with (43b.-d.).

²⁵ See, for instance, Doron (1983) for Hebrew, also mentioning Arabic; Déprez (2003) for Haitian Creole in (i); Green (2003) for Hausa in (ii); Torrence (2005) for Wolof in (iii); Kopotev (2007) for Finnish in (iv), among many other languages.

- (i) Jan bèl Haitian Creole
 John good-looking
 John is good looking
 (Déprez, 2003: 138)
- (ii) Q: Audù manòmī nè, kō?
 Audu farmer FocusMarker.m Q Hausa
 ‘Audu is a farmer, isn’t he?’
 A: Ā’ā, Audù mahàucī nè.
 no Audu butcher FocusMarker.m
 ‘No, Audu is a butcher.’
 (Green, 2003: 2)
- (iii) Xale yi mer-na-ñu. Wolof
 child DET andry-na-3PL
 ‘The children became angry.’
 (adapted from Torrence, 2005: 192)
- (iv) Āiti tässä. Finnish
 mother here
 ‘The mother is here.’
 (adapted from Kopotev, 2007: 130)

- (43) a. Djon pode **ser/*e** spertu, mas N ka ta kridita. Copula Vs
 Djon can be smart but 1SG NEG IPFV believe
 ‘Djon may be smart, but I don’t believe that.’
- b. Djon pode **papia/*papiar** sabi, mas ... Non stative Vs
 Djon can talk well but
 ‘Djon may talk well, but I don’t believe that.’
- c. Djon pode **sta/*star** duenti, mas ... Stative Vs
 Djon can be sick but
 ‘Djon may be sick, but ...’
- d. Djon pode **txiga/*txigar** parmanhan, mas ... Unaccusative Vs
 Djon can arrive tomorrow.morning but
 ‘Djon may arrive tomorrow morning, but ...’

Just like the Past tense marker *era*, the Present tense form *e* is incompatible with the imperfective marker *ta*, as in (44a.), and cannot co-occur with the overt Past tense form *-ba*, as (44b.). These facts are additional evidence in favor of *e* as the Present tense form of the copula verb *e* ‘to be’.

- (44) a. *Djon (ka) **ta** **e** bunitu.
 Djon NEG IPFV be pretty
- b. *Djon (ka) **eba** bunitu.
 Djon NEG be(PST) pretty
 Both: ‘Djon isn’t pretty.’

In addition, the behavior of subject clitics and copula verb *e* in negative sentences shows that the Present tense form *e* only occurs in T° if the subject is a full DP (cf. *Djon* in (34) above) or a nonclitic pronoun (as in (45a.))²⁶.

(45) a. **Ami** *e* *ka* *runhu*.
 NONCL.1SG be NEG bad

b. ***N** *e* *ka* *runhu*.
 CL.1SG be NEG bad
 Both: ‘I am not bad.’

Following Baptista (2002: 249), I will assume that (i) the copula verb in its Present tense form *e* is ‘too light’ to support a clitic (as the ungrammaticality of (45b.) shows)²⁷ and that (ii) the syntactic subject clitic²⁸ can attach to Neg° only when the copula has verbal properties²⁹, rendering grammatical a sentence in which the copula heads a V° position (cf. (46a.)) or is deleted, as in (46b.).

(46) a. **N** *ka* *e* *runhu* (mas tanbe **N** *ka* *e* *mansu*).
 CL.1SG NEG be bad but too 1SG NEG be gentle
 ‘I am not bad, but I am not gentle also.’

b. **Ami**, **N** *ka* *runhu*.
 1SG CL.1SG NEG bad
 Lit.: ‘I, I not bad.’

²⁶ This is also true for affirmative copulative sentences, as (i), showing that the copula verb in the present tense does not support a subject clitic.

(i) a. ***N** *e* *bunitu*.
 CL.1SG be pretty

b. **Mi** *e* *bunitu*.
 NONCL.1SG be pretty
 Both: ‘I am pretty.’

²⁷ Analyzing similar data, Baptista (2004: 103) suggests that *e* has a clitic nature that relates well with the fact that the copula (*e*) and the 3rd person singular pronoun (*e*) are homophonous.

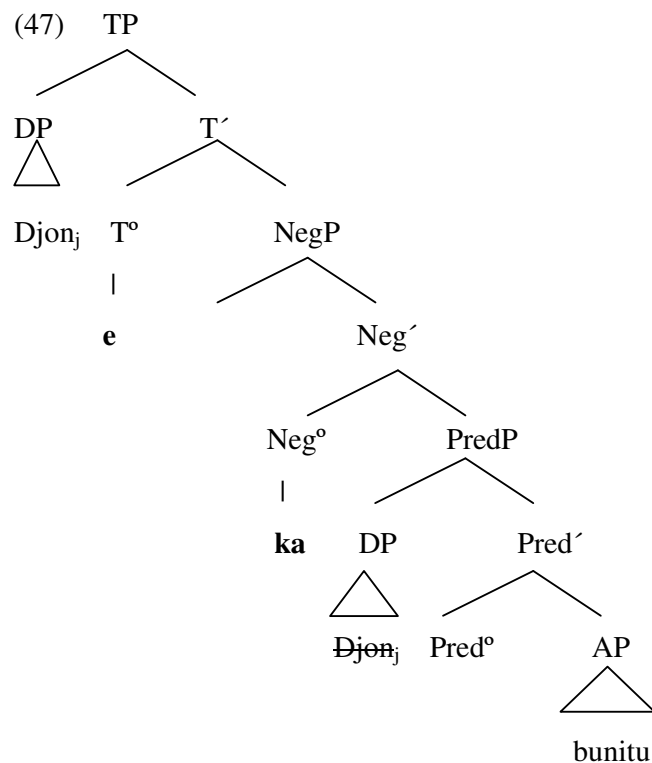
²⁸ Although I am assuming that in CVC subject clitics are syntactic clitics, in the spirit of Pratas (2007), I will not defend that they are agreement markers (cf. Baptista, 2002).

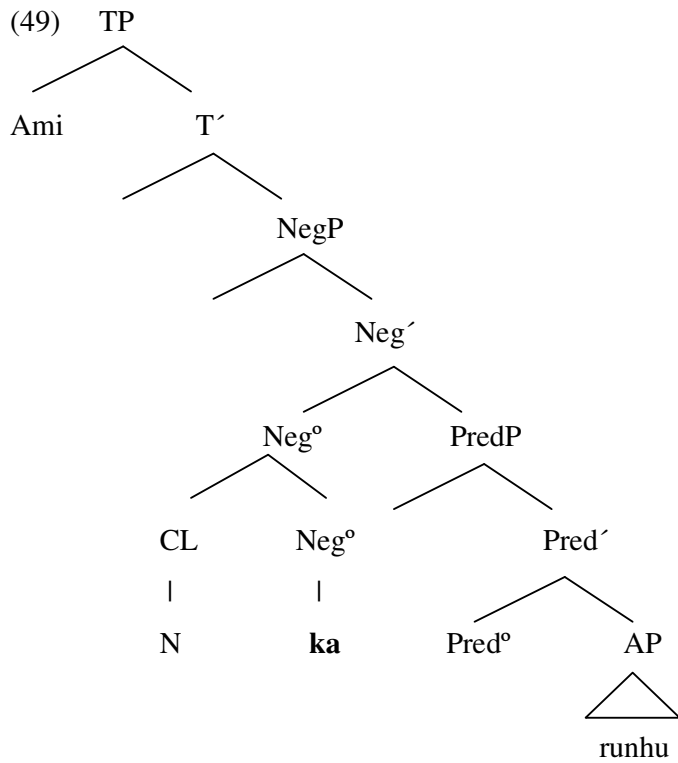
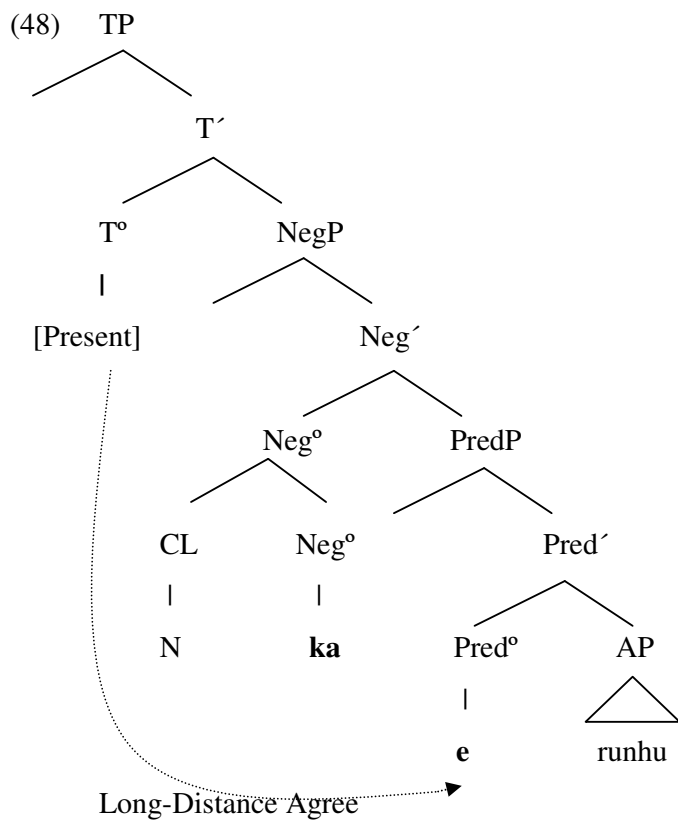
²⁹ Baptista (2004: 107) proposes two different approaches to copula constructions in CVC:

A – *e* has nominal properties inherited from substrates (Wolof), not allowing the co-occurrence with a clitic subject;

B – *e* has retained the verbal properties of the superstrate (Portuguese).

Finally, the structure I propose for sentences like (34) and (46), represented in (47)-(49), follows Adger & Ramchand's (2003) ideas about predication, whereby "a clause consists of a predication core where thematic relations are licensed, and which is delimited by a head, Pred. Pred acts as the syntactic edge of the predication core".





Note again that the copula *e* occurs as the nucleus of a predication phrase only when it follows the negation marker *ka*, as in (48), showing in this case superstrate influence (cf. Portuguese *eu não sou mau* / **eu sou não mau* ‘I am not bad’). In this case, just like in the case of the Past tense marker *era* in (37) above, the T° features of the sentence will be checked through a mechanism of long-distance agreement against the copula verb in situ. In all other cases of Present tense copula forms, the predication head is empty and *e* must occur in T°, spelling out the [Present] formal feature, or otherwise is null, as in (49).

Table 2. sums up my proposal for the possibilities of verb placement in CVC, since V-to-T° movement is excluded from the language. As we can observe, the copula verb in the Present tense form (*e*) usually spells out T° features or is absent and it can also occur in Pred° (recall that that situation is very limited, being restricted to post-Neg copula as in (46a.) and represented in (48)); the copula verb in the past tense form (*era*) always heads a VP; stative verbs that select for DP complements like *ten* ‘to have’ and *kre* ‘to like’ (see (18)-(19) above)³⁰ and all the other verbs stay in VP (see (16), (17) and (21)), as represented in (50).

Table 2. V-placement in CVC

	Transitive verbs	Stative verbs	Copula verb <i>e</i>	
			Past <i>era</i>	Present <i>e</i>
T°	*	*	*	✓
V°	✓	✓	✓	✓

- (50) a. [TP Kes mininu-li [NegP ka [AspP ta [VP **papia** ingles sabi]]]].
b. [TP Bu [NegP ka [VP **tene** dinheru txeu dimás]]].
c. [TP Djon [NegP ka [VP **era** [SC bunitu]]]].
d. [TP Djon [T° **e**] [NegP ka [PredP [AP bunitu]]]].
e. [TP [NegP [Neg° [CL N [Neg° ka]]] [PredP **e** [SC runhu]]]].
f. [TP Ami [NegP [Neg° [CL N [Neg° ka]]] [PredP [AP runhu]]]].

³⁰ I have nothing to say about stative verbs that select for PP complements, like *gosta* ‘to like’ in example (15) in the text above, where the verb occurs to the left of the adverb *txeu dimás* ‘too much’. On the aspectual values of the stative verb *gosta* in CVC, see Pereira (2005).

Assuming Pollock's (1989: 397) proposal for English, in (51), I propose that CVC³¹ behaves in a very similar way to English, since the functional node Neg occurs between TP and VP, as in (52), and there is no V-to-T movement.

(51) [CP [TP [NegP [AgrP [VP ...]]]]] English

(52) [CP [TP [NegP [AspP [VP ...]]]]] CVC

2.3. The pronominal system

As I will present in the forthcoming chapters, wh-questions and (restrictive) relative clauses of CVC display strategies that fill with a pronoun the original site of the questioned or relativized element, such as (53)-(54).

³¹ Recall that I am always considering Santiago Island variety. Ana L. Santos (p. c.) called my attention to other variety of CVC, namely the Creole spoken in São Vicente (Barlavento Islands – CVC_B), which seems to exhibit three different negation markers: *na* 'no' and *ka*₁, used with copula verbs, as in (i), and *ka*₂, applied to all non-copula verbs, as in (ii):

(i) a. Bo **n'e** parve. CVC B
 2SG NEG-be fool
 b. Bo **ka** (e) (***ka**) parve.
 Both: 'You are not fool.'

(ii) Bo **k'/*n'** oiá Maria. CVC B
 2SG NEG see(PFV) Maria
 'You did not see Maria.'

Note further that these three negation markers cannot co-occur in any circumstance, therefore, they should not be mistaken with the negation elements that some West African languages exhibit, like Gengbe (from the Gbe cluster) and Santome (see Aboh, 2004 and Hagemeijer, 2007: chap. 4, respectively). Moreover, the negation marker *na* (< Portuguese *não* 'no') does not exist in the Creole of Santiago Island. Nevertheless, sentences (i) and (ii) can be a piece of evidence supporting two different structural positions for Neg in the variety of CVC_B and two distinct *ka* morphemes. Particularly, a NegP₂ above TP, headed by *na* and *ka*₂ (with copula verbs), and NegP₁ above AspP and headed by *ka*₁, as in (iii).

(iii) a. Bo [NegP₂ **ka**₂/**n'** [TP [T° **e**_i] [VP **e**_i [SC parve]]]].
 b. Bo [TP [NegP₁ **ka**₁ [AspP [VP **oiá** [DP Maria]]]]].

[Odja li, pur izenplu bu ta ben k'un buru, bu ta mara-l. Bu ta bá busca dos láta un intxidu di grógu, kelotu intxidu d'águ, bu ta poi si diánti. / Look, for example, you come with a donkey and you tie him up. You get two cans, one full of grogue and the other one with water, and you put them in front of it.]

(53) Bu sabe kál ki e ta bá pa **el**?

2SG know(IPFV) which that 3SG IPFV go to 3SG

E ta bai dretu di águ!

3SG IPFV go straight of water

Lit.: 'Do you know which one he goes to it? He goes straight to the one that has water!'

'Do you know to which one he goes? Straight to one that has water!'

(adapted from Brüser & Santos, 2002: 267)

(54) Nha mai kunpra-m un ursu fofu

POSS.1SG mother buy(PFV)-3SG a bear sweet

ki N ta deta sênpri djuntu ku **el**.

that 1SG IPFV sleep always together with 3SG

Lit.: 'My mother bought me a lovely bear that I always sleep with it.'

According to Bickerton (1993: 190-1)³², in Creole languages "pronouns were the most likely to be retained", because they are high frequency items, and "the distribution of pronouns in A-positions presents no substantive difference from the distribution of pronouns in the major source language". I believe this may be true in a lexicalist point of view but, syntactically, there is much more to be said about these elements. For instance, in sentences (53)-(54) above *el* '3SG' comes from Portuguese *ele* 'him/it' (as in *Eu durmo sempre com **ele*** 'I always sleep with him/it') and both *el* and *ele* are object pronouns. However, in CVC, *el* functions differently from *ele* in EP, occurring in a context that assigns it an expletive-like status, not being a 'true' pronoun (see chapter 5 for the discussion of this topic).

In the next section I will review what has been proposed for the CVC pronominal system, considering the distribution and function of pronominal elements in the clause, particularly the pronominal objects that are complement of prepositions.

³² The author assumes here a lexicalist version of Generative Grammar, in which "creole grammars will be largely determined by three processes: lexical loss (...), lexical retention, and lexical reconstitution" (id., p. 189).

2.3.1. A tripartite pronominal system

CVC exhibits subject and object (OBJ) pronouns as presented in table 3. (inspired in Pratas, 2004: 60-61).

Table 3. Subject and Object pronominal elements in CVC and EP

Number	Person	CVC		EP		
		SBJ	OBJ	SBJ	OBJ	
Singular	1 ^a	Ami / Mi / N	Mi / m	Eu	Mim / me	I / me
	2 ^a (informal)	Abo / Bo / Bu	Bu / u	Tu	Ti / te	You
	2 ^a (formal, masc.)	Anhu / Nhu	Nhu	Senhor	Senhor	Mister
	2 ^a (formal, fem.)	Anha / Nha	Nha	Senhora	Senhora	Mistress
	3 ^a	Ael / El / E	El / l	Ele(a)	Ele(a) / o(a) / lhe	s/he, it / him, her
Plural	1 ^a	Anos / Nos / Nu	Nos / nu	Nós	Nós / nos	We / us
	2 ^a	Anhos / Nhos	Nhos	Vós (senhores)	Senhores / vos	You
	3 ^a	Aes / Es	Es / s	Eles(as)	Eles(as) / os(as) / lhes	They / them

Following Pratas (2004³³), I will assume that the tripartite pronominal system described in Cardinaletti and Starke (1994) is observed in CVC. Furthermore, SBJ pronouns can co-occur (cf. (55)), while OBJ pronouns can only co-occur if they are not contracted (cf. Veiga, 2000: 347), as in (56) and (57).

³³ Pratas (2007) proposes a different classification of the pronominal forms of CVC, distinguishing from what she calls ‘emphatic’ and ‘deficient’ (free and clitic) forms, which correspond to strong, non-clitic and clitic forms of Cardinaletti and Starke’s (1994) pronominal types (id., p. 132). For the purposes of this dissertation, it is sufficient (and preferable) to assume a more ‘classic’ division of the pronominal system.

(55) [SBJ Ami], [SBJ N] odja-[OBJ u] na sinema.
 1SG 1SG see(PFV)-2SG in cinema
 ‘I saw you at the cinema.’

(56) Abo da-[OBJ1 m] [OBJ2 el].
 2SG give(PFV)-1SG 3SG
 ‘You gave it to me.’

(57) Q: Djon da Maria ses libru?
 Djon give(PFV) Maria POSS.3PL book
 ‘Djon gave Maria his books?’

A:

a. Aian, el da-[OBJ1 l] [OBJ2 es].
 yes, 3SG give(PFV)-3SG 3PL
 Lit.: ‘Yes, he gave her them.’

b. *Aian, el da-[OBJ1 l]-[OBJ2 s]
 Lit.: ‘Yes, he gave her them’.

Note also that in the case of Double Object Constructions (DOC), as in (56) and (57) above, the order between OBJ pronouns is rigid³⁴, since the primary OBJ (OBJ₁) must occur obligatorily connected with the verb, while the secondary OBJ (OBJ₂) comes after it, as the ungrammaticality of (57c.) shows (compare this sentence with (57a.)).

(57) c. *Aian, el da-[OBJ2 s] [OBJ1 el].
 yes 3SG give(PFV)-3PL 3SG
 Lit.: ‘Yes, he gave them her’.
 ‘Yes, he gave them to her’.

³⁴ In DOCs the order between objects is also rigid when they are full DPs and not just pronouns, as in (i).

(i) a. Nhu Ntoni ka ta da [OBJ1 es pobri bedju ki e omi di Des]
 mister Ntoni NEG IPFV give DEM poor old that is man of God
 [OBJ2 kumida]?
 food
 Lit.: ‘Mr. Ntoni does not give this poor old man that is a man of God food?’

b. *Nhu Ntoni ka ta da [OBJ2 kumida] [OBJ1 es pobri bedju ki e omi di Dios]?

Considering the OBJ pronouns in CVC, particularly the ones that are selected by prepositions, the data show us that only nonclitic forms can be the complement of prepositions, as in (58), just like in EP in (59), while verbs select for clitic pronouns (cf. (60)-(61)).

- (58) a. Djon e un médiku spirienti, bu pode kunfia [_{PP} **n'el/*na-l**].
 Djon be a doctor experient 2SG can trust in-3SG
 'Djon is an experient doctor, you can trust him.'

b. N ka ta papia [_{PP} **ku-el**[kweɫ]/***ku-l**].
 1SG NEG IPFV talk with-3SG
 'I don't talk with him.'

- (59) Tu podes confiar [_{PP} **nele/*no**]. EP
 2SG can trust in-3SG
 'You can trust him.'

- (60) Bo odja-**l/*el** na merkadu.
 2SG see(PFV)-3SG in market
 'You saw him at the market.'

- (61) Tu viste-**o/*ele** no mercado. EP
 2SG see(PFV)-3SG in-the market
 'You saw him at the market.'

Although the language does not have an extensive declension system, distinguishing Accusative from Dative pronouns³⁵, I will assume that transitive verbs assign their complements a structural Case (Accusative), while verbs that select for prepositional internal arguments (like *gosta* 'to like') and prepositions like *di* 'of', *ku* 'with', *na* 'in', *pa* 'for', etc., assign their complements an inherent Case (Objective – OBJ), which is

³⁵ In the same way as English, the declension system of CVC has probably collapsed into a single pronoun for both Accusative and Dative Cases.

non-distinct from the one assigned to Nominative weak (non-clitic) pronouns³⁶. The fact that the vowel of the preposition is phonologically dropped (as [a] of *na* ‘in’ (58a.) above) or semivocalized (as [w] of *ku* ‘with’ in (58b.)), when it co-occurs with an OBJ pronoun, reinforces my assumption.

2.3.2. Wh-constituents

CVC displays wh-constituents for different grammatical relations, as table 4. shows. These pronouns may surface in different forms when they stay in situ (as it will be described in chapter 3.) and when they are dislocated. Table 4. only presents them in their in situ form.

³⁶ Brito, Duarte & Matos (2003: 819) also propose that the complements of the prepositions are ‘strong’ pronominal forms and not clitics in EP.

Table 4. *Wh-consituents and their grammatical functions*³⁷

Grammatical functions	Wh-elements		
	Wh-words	Wh-phrases	
SBJ	Ken/kenha	Ki N	Who, which N
	Kusé	Kal(s) N	What, which of N
OBJ	Ken/Kenha	Ki/kantu N	Who, what, which N, how many N
	Kusé		
	Kantu	Kal(s) N	How much/many, which of N
OBL _{Nucl}	P ken/kenha	P ki N	P who, P which N
	P kusé	Kal(s) N	P what, which of N
OBL _{Access}	Modi	P ki N	How, P which N
	Pamodi	Kal(s) N	Why, which of N
OBL _{Loc}	Undi	P ki N	Where, P which N
	P _{di/na/pa} undi	Kal(s) N	P where, which of N

2.3.2.1. Ken / Kenha

CVC apparently exhibits two wh-words for the same grammatical functions in the language: *ken* and *kenha*, both ‘who’. *Ken* and *kenha* are nominal expressions specified for the semantic feature [+Human]³⁸ that introduce wh-questions and relative clauses, as (62) and (63) show.

³⁷ Suzuki (1994) claims that the wh-elements of CVC are similar to those of EP and presents a list of wh-words that includes *kuma* (from Portuguese *como* ‘how’), as in (i).

(i) Kuma n ta báy?
how 1SG IPFV go
‘How can I go?’

(adapted from Meintel, 1975, ap. Suzuki, 1994: 24)

However, as I did not find in my corpus any occurrences of *kuma* and the informants do not accept it, I did not include it in the wh-word repertoire of CVC.

³⁸ According to Post (1995: 199), in Fa d’Ambu (a lexically-based Portuguese creole spoken in Ano Bom island, Equatorial Guinea), “all question words are (originally) either complex expressions or simple (pro)nouns, e.g. *xa* [what] derives from ‘(some)thing’, and *kenge* [who] derives from *ke/ku* ‘what’ + *nge* ‘person’”.

- (62) **Ken/kenha** ki ta kunpra kel-li?
 who that IPFV buy DEM-PROX
 ‘Who buys this?’

- (63) Es anu [_{CP} **ken/kenha** ki planta batata] ta tra txeu ganhu.
 DEM year who that plant potato IPFV take very earn
 ‘This year, whoever planted potatoes will have profits.’

Are these really two distinct wh-words or are they variants of the same wh-pronoun? We may argue that while *ken* seems to be a bare wh-pronoun, closer to Portuguese *quem*³⁹, *kenha* is a complex wh-pronoun that seems to result from the grammaticalization of the bare wh-word with the emphatic expression *e ki* ‘is that’, deriving *kenha* from *ken* + *e* (copula verb) (*ki*) ‘who + is (that)’⁴⁰. Assuming that the emphatic expression is in C^o⁴¹, an argument in favour of this hypothesis of *kenha*’s grammaticalization is the in situ occurrence of this wh-word.

- (64) Bu ka odja **kenha**?
 2SG NEG see(PFV) who
 Lit.: ‘You did not see who?’
 ‘Who didn’t you see?’

Since in (64) there is no C^o available⁴², the wh-word *kenha* cannot be analyzed internally as *ken* + *e* (*ki*).

³⁹ Brüser & Santos (2002: 325) assign *kenha* a Portuguese origin and describe it in the following way: “**kenha** (...) interrogative pronoun, invariable, also used in relative clauses, requiring the specification of one or several persons, var. cr. l. *ken* (*ki*), (...) pg. *quem*?” (my translation).

⁴⁰ Baptista (2002: 64), in a footnote to table 13, refers that I. Brito suggested this to her.

⁴¹ Costa & Duarte (2000) propose this for the emphatic expression *é que* ‘is that’ of EP. In this dissertation I will follow these authors, because at least in Santa Catarina’s variety of CVC, the copulative verb *e* is deleted and the emphatic expression is reduced to *ki*, a fact that goes in the line of non-V-to-C movement (cf. Baptista, 2002, Pratas, 2007, and section 2.1. of this chapter).

⁴² As Brito, Duarte & Matos (2003: 466) state, although in EP complementizers and question morphemes do not usually co-occur, as in (i), in the colloquial varieties of BP and Mozambique Portuguese (MozP) it is possible to hear utterances as (ii):

- (i) *Quem **que** chegou? EP
 who that arrive(PFV)
 ‘*Who that arrived?’
- (ii) Onde **que** foste? BP / MozP
 where that go(PFV).2SG
 Lit.: ‘Where that you went?’

Some of my informants say that there are interpretative differences between *ken* and *kenha*, suggesting that *ken* has a [-specific] reading and *kenha* a [+ specific] one, i.e. according to them, the use of *kenha* presupposes that the speaker has a particular person in mind. And it seems that my informants' perceptions are supported by the fact that both *ken* and *kenha* function as a quantified variable (cf. (65)), but only *kenha*, and not *ken*, may have an existentially quantified antecedent, as in (66).

- (65) Nos nu ta gostaba di purgunta
 1PL 1PL IPFV like(PST) of ask
tudu ken/kenha ki ta atxa
 every who that IPFV think
 ma «kriolu é un língua vulgar» ki ka debe ser ofisializadu, si
 that Creole be a language ordinary that NEG must be official if
 'We would like to ask whoever thinks that «Creole is an ordinary language»,
 if ...'
 (adapted from Veiga, 2005: 5)

- (66) **Kada kenha/*ken ki** lenbra o toma disizon di
 each who that remember or take decision of
 skrebe na kiriolu.
 write in Creole
 'Each one who remembers or decides to write in Creole...'
 (adapted from Silva, 1998: 117)

However, some syntactic tests show that these wh-words behave alike when they are extracted, as in (67)-(70).

As well as in popular French (ibid., fn. 40):

- (iii) Où **que** tu vas?
 = (ii)

French

Root contexts

- (67) [Ken/kenha] ki ~~[ken/kenha]~~ kunpra kel baka-li?
who that buy(PFV) DEM cow-PROX
'Who bought this cow?'

Embedded contexts

- (68) N ka sabe [ken/kenha] ki ~~[ken/kenha]~~
1SG NEG know(IPFV) who that
kunpra kel baka-li.
buy(PFV) DEM cow-PROX
'I don't know who bought this cow.'

Embedded SBJ extraction

- (69) [Ken/kenha] ki bu atxa ma ~~[ken/kenha]~~ ta trabadja txeu?
who that 2SG think(IPFV) that IPFV work very
'Who do you think that works a lot?'

Embedded DO extraction

- (70) [Ken/kenha] ki bu atxa ma Djon odja ~~[ken/kenha]~~ onti?
who that 2SG think(IPFV) that Djon see(PFV) yesterday
'Who do you think that Djon saw yesterday?'

Nevertheless, when in situ, *kenha* seems to be preferred over *ken* (see (64), for convenience repeated here as (71)). Does this fact prove that the two wh-words must be distinct? Perhaps the 'echo' reading, typical of in situ wh-questions, requires a discursively salient wh-word, in order to convey surprise for what have been said in the previous discourse. This saliency may be related to their phonological weight (*kenha* is stronger and *ken* is weaker), which seems to play an important role here.

- (71) Bu ka odja **kenha** / ^{??}**ken**?
2SG NEG see(PFV) who
'You didn't see who?'

I conclude, then, that synchronically *ken* and *kenha* are allomorphs of the same wh-word.

Note further that *ken* and *kenha* are almost always followed by the complementizer *ki* ‘that’. According to Baptista (2002: 63), the absence of the complementizer *ki* with subjects questioned by *kenha* yields ungrammatical sentences, a fact confirmed by almost all my informants, as in (72).

- (72) Ken/kenha ***(ki)** txiga?
 who that arrive(PFV)
 ‘Who arrived?’

Whenever *ken/kenha* introduces a relative clause, the same facts are found, as in (65) and (66) above, for relative clauses with quantified antecedents, and (73), for ‘pure’ free relative clauses.

- (73) Ken/Kenha ***(ki)** ta fase bondadi ta ganha ku Dios.
 who that IPFV do goodness IPFV win with God
 ‘Whoever practices goodness pleases God.’

The obligatory occurrence of *ken/kenha* and *ki* in free relative clauses contexts may indicate that this kind of wh-construction is closer to wh-questions than to the other types of relative clauses⁴³.

2.3.2.2. Kusé

Kusé ‘what’ is a nominal expression specified for the semantic feature [-Human] and [\pm Animate]. Just like *kenha*, *kusé* seems to be a complex interrogative pronoun that

⁴³ I. Duarte (p.c.) referred to me that some EP speakers (namely, undergraduate students) accept relative clauses with a C° filled by *é que* ‘is that’ (equivalent to *ki* in CVC), not distinguishing them from wh-questions, which typically allow the focus expression *é que*. See, for instance, a spontaneous speech utterance recorded by me that supports the observation:

(i) Não há aldeia nenhuma aonde **é que** nós não
 NEG have village none to-where is that 1PL NEG
 tenhamos gente a desertar.
 have(IPFV) people to desert
 Lit.: ‘There is no small village where is that our people isn’t deserting.’
 (Mayor of Vimioso, RFM, 8 o’clock news, 17/6/2005).

is the output of a grammaticalization process of *kusa + e* ‘thing is’⁴⁴. As we can see in (74), *kusé* may occur in in situ wh-questions, implying that it has already lost its original meaning of *kusa + e*.

- (74) Maria obi **kusé**?
 Maria hear(PFV) thing
 Lit.: ‘Maria heard what?’

Note also that *kusé* cannot be preceded (and questioned) by *ki*, as in (75), proving that it is already an interrogative pronoun per se. But the fact that *kusé* cannot introduce relative clauses may be related to its origins, since in these contexts only *kusa ki* ‘thing that’ can be employed, as in (76).

- (75) ***Ki kusé** ki Djon kunpra?
 which thing that Djon buy(PFV)
 Lit.: ‘#Which what is that Djon bought?’

- (76) **Kusa/*Kusé** ki bu fase e kasabi.
 thing/what that 2SG do(PFV) be unpleasant
 ‘{The thing that/What} you did is unpleasant.’

However, contrary to *kenha*, *kusé* does not have a systematic alternative variant. Therefore, I will assume that the word *kê* ‘what’ cannot be taken as a variant of *kusé*, since it only occurs within the wh-word *pakê* ‘why’⁴⁵.

- (77) **Kusé/*kê** ki bu fla?
 what that 2SG say(PFV)
 ‘What did you say?’

⁴⁴ Baltasar Lopes da Silva (1984: 165) suggests that *kusé* ‘what’ comes from “(...) *que coisa é* ‘which thing is’, both in root and embedded questions...” and therefore “(...) the dialect deals as it can with the problem of the wh-word *que* preceded or not by *o*” (my translation). Brüser & Santos (2002: 385) also propose that *kusé* derives from Old Portuguese (*que*) *cousa é* ‘(which) thing is’.

⁴⁵ According to Brüser & Santos (2002: 550), the form *pakê* ‘why’ comes from *p(ar)a quê* ‘for what’ and is synonymous of *pa kusé*. Note still that this expression is typical of the creole spoken in Praia, a lighter variety of CVC.

Furthermore, and in the same way as *ken/kenha*, *kusé* occurs usually followed by the complementizer *ki*, as in (78). Although my informants accept sentences in which *ki* is absent, as in (79) (see section 2.5. for a detailed analysis of complementizer *ki*).

(78) *Kusé txiga?⁴⁶
 thing arrive(PFV)
 ‘What arrived?’

(79) Kusé (ki) katxor kume?
 what that dog eat(PFV)
 ‘What did the dog eat?’

The behavior of *ken/kenha* and *kusé* with respect to the complementizer *ki* could be analyzed as in languages like Wolof. Specifically, according to Torrence (2005: 80), Wolof exhibits a paradigm of *u*-forms that “can be used to form wh- questions from subjects, objects, adjuncts, etc. as long as it corresponds to a “simple” Wh phrase, e.g. “who”, “what”, “how””, as in (80).

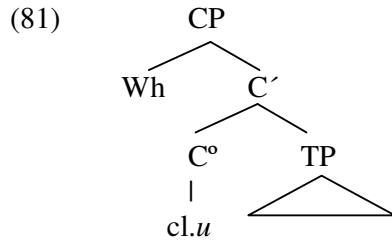
(80) a. **K.u** togg ceeb bi ak jën wi. (SBJ) Wolof
 cl.u cook rice the and fish the
 “who cooked the rice and the fish?”

b. **Y.u** jigéen ji togg. (DO)
 cl.u woman the cook
 “what(pl) did the woman cook?”
 (from Torrence, 2005: 80)

⁴⁶ The ungrammaticality of this sentence may be explained by the presence of an ergative verb. Recall that VS word order, a very restricted order in CVC as we saw in section 2.1., is allowed by this kind of verbs. Although this order is even more limited with *ken/kenha*, Veiga (1995) gives an example in which this wh-word can occur without *ki*. Curiously, the example involves a copulative verb:

(i) **Ken** e mi pa ser presidenti?
 who is 1SG to be president
 ‘Who am I to be president?’
 (adapted from Veiga, id., p. 367)

Torrence (2005: 90) treats these *u*-forms as agreeing complementizers, as represented in (81), proposing that the *u*-form fills in C° and that a silent wh-word must occur in SpecCP in order to trigger agreement on C°.



I will argue that, differently from Wolof, *ki* is a complementizer specified for a set of formal features that need to be checked. In CVC, the formal features of *ki* in C° are checked by a wh-operator (irrespective of their morphophonemic nature, e.g. *ken/kenha*, *kusé* or *ki N*) that moves up to SpecCP, but *ki* is not a clitic (in fact, the complementizer *ki* can host the 1SG subject clitic N, as in *dipos k'N grávida, N para skola...* ‘after getting pregnant, I abandoned school...’. See also section 2.3.2.6. below in this chapter).

2.3.2.3. Kantu / Kal(s)

Kantu ‘how much/many’ is an invariable interrogative pronoun that indicates quantity, as in (82), but quantity of time is expressed only when *kantu* is followed by a noun (cf. (83))⁴⁷.

- (82) a. **Kantu** (ki) e mankara?
 how.much that be peanut
 Lit.: ‘How much is the peanuts?’

⁴⁷ Note that CVC does not exhibit a simple wh-word to convey this kind of information. *Kantu* ‘when’ exists in the language, although it functions as a subordinative temporal conjunction, as in (i):

(i) **Kantu** N tenba dinheru, N ta kumeba tudu dia.
 when 1SG have(PST) money 1SG IPFV eat(PST) every day
 ‘When I had money, I ate every day.’

b. **Kantu fidjus** (ki) bu ten?
 how.many sons that 2SG have(IPFV)
 ‘How many children do you have?’

- (83) Dja ten **kántu dia** ka kusiadu n'es kása?
 already have(IPFV) how.many day NEG cook.3SG in-DEM house
 ‘For how many days does anybody cook in this house?’
 (Brüser & Santos, 2002: 385)

Kal ‘which.of’ is a wh-pronoun that may vary in number (plural: *kas*⁴⁸). Usually, it introduces partitive constructions and is preferred in predicative questions, as (84) and (85).

- (84) Di bu(s) subrinhus, **kal** ki bu gosta más txeu?
 of POSS.2PL nephews which.of that 2SG like(IPFV) more very
 Lit.: ‘From your nephews, which of them do you like the most?’

- (85) **Kal** ki é kusa mas inportanti
 which.of that be thing more important
 ki pode kontise ku nos língua?
 that can happen with POSS.1PL language
 ‘Which is the more important thing that can happen to our language?’
 (adapted from Silva, 1998: 115)

Kantu and *Kal(s)* are nominal specifiers. So, the number marking shows up in the noun only (when preceded by *kantu*, as in *kantu fidjus*, in (82b.)) or in the wh-word and the noun, as in *kas di bu subrinhus*, in (86).

- (86) **Kas di bu subrinhus** ki bu gosta más?
 which of POSS.2PL nephews that 2SG like(IPFV) more
 ‘Which of your nephews do you like more?’

⁴⁸ Brüser & Santos (2002: 287), for instance, say that *kal* is an “interrogative pronoun, noun and adjective, invariable, used in relative and exclamative clauses, which operates a selection among several things” (my translation).

When *kantu* and *kal* occur in sentence initial position, they are optionally followed by *ki*, especially if the sentence contains a copulative verb, as in (87).

- (87) **Kal** é mas inportanti?
 which.of be more important
 Lit.: ‘Which of (them) is more important?’
 ‘What is more important?’
 (adapted from Silva, 1998: 111)

As nominal specifiers, *kantu* and *kal* do not require an overt complementizer in C° in order to trigger agreement.

2.3.2.4. Modi / Pamodi

*Modi*⁴⁹ ‘how’ and *pamodi*⁵⁰ ‘why’ are adverbial wh-words that express, respectively, mood and reason. When in sentence initial position, these wh-words can be followed by *ki*.

- (88) **Modi (ki)** Djon fase kel funku-li?
 how that Djon do(PFV) DEM hut-PROX
 ‘How did Djon do this hut?’
- (89) **Pamodi (ki)** Maria ka ben?
 why that Maria NEG come(PFV)
 ‘Why didn’t Maria come?’

Despite allowing the absence of *ki* more freely than the other wh-words, some of my informants claim that the absence of *ki* turns these sentences into declaratives. In fact, *modi* and *pamodi* are also reason conjunctions (cf. (90)) and it is the overt presence of *ki* in C°[+wh] that leads unambiguously to their interpretation as wh-words⁵¹.

⁴⁹ This wh-word appears often in its abbreviated form *mó* (< *modi*) and *moki* (< *modi* + *ki*) ‘how is that’.

⁵⁰ According to Brüser & Santos (2002: 553), *pamodi* comes from the Old Portuguese expression *por mor de* ‘for the sake of’ and it can occur in a reduced form *pamó* (< *pamodi*) ‘why’.

⁵¹ Probably, these speakers have a grammar in which all wh-questions of CVC are necessarily focused /typed with *ki*.

- (90) a. **Modi** (*ki) bu ka gosta d'el, e ta kasa ku Djon.
 because 2SG NEG like of-3SG 3SG IPFV marry with Djon
 'As you don't like her, she is going to marry Djon.'
- b. N ka pode sai **pamodi** (*ki) N ten txeu izami.
 1SG NEG can(IPFV) go.out because 1SG have(IPFV) very exam
 'I cannot go out because I have lots of exams.'

2.3.2.5. Undi

Undi 'where' is a wh-word that expresses place and introduces both wh-questions and relative clauses, as (91) and (92), respectively.

- (91) **Undi** (ʔki) es kunpra pexe?
 where that 3PL buy(PFV) fish
 'Where did they buy the fish?'
- (92) a. Kes loja [_{CP} **undi** (ʔki) N kunpra es ropa-li]
 DET store where that 1SG buy(PFV) DEM clothes-PROX
 es fitxa.
 3PL close(PFV)
 Lit.: 'The stores where I bought these clothes, they have closed.'
- b. [_{CP} **Undi** (ʔki) nu ta bibi] ka ten agu di tubu.
 where that 1PL IPFV live NEG have water of pipe
 Lit.: 'Where we live has no running water.'

This wh-word may be preceded by the prepositions *na* 'in' and *pa* 'to', assuming a contracted form in the last case as *pundi* (< *pa* + *undi* 'to where'). Sometimes, the prepositions seem to have crystallized in the locative wh-word and grammaticalized, i.e. they do not bring a new meaning into *undi*⁵². In fact, it is possible to find examples where both prepositions co-occur with *undi*, as in (93) and (94).

⁵² Brüser & Santos (2002: 857) consider *naundi* 'where' a variant of *undi*.

- (93) Manel papia ku si barinha, abri odju fitxa,
 Manel talk(PFV) with POSS.3SG wand open(PFV) eye close(PFV)
 dja-l sabeba **na p'undi** stába s'irmun Pálu.
 already-3SG know(PST) in to-where be(PST) POSS.3SG-brother Pálu
 ‘Manel talked to his wand, opened his eyes, closed them, and knew where his
 brother Pálu was.’

(adapted from Brüser & Santos, 2002: 857)

- (94) **Napundi**⁵³ bu sta?
 where 2SG be(IPFV)
 ‘Where are you?’

(adapted from Veiga, 2000: 166)

As it allows a preposition to precede it, *undi* may be viewed as a DP [+LOC]. Furthermore, *undi* occurs preferably with a null C° (i.e. without an overt *ki*, as in (91)-(94)) and is involved in wh-null gap constructions (cf. chapter 3 and 4, on this topic for wh-questions and relative clauses)⁵⁴. Cinque (1981) shows that in Italian bare NP adverbials pattern with Subject and Direct Object DPs in allowing gap relativization, as opposed to PP adverbials. According to Bianchi (2002a: 103, fn. 1), this suggests that the crucial factor in the NP Accessibility Hierarchy must be DP versus PP relativization.

⁵³ Although I decided to maintain the original spelling used in the written corpus, not questioning the spelling options of the authors, the form *napundi* used by Veiga in example (94) in the text must be understood as *na p(a)undi*.

⁵⁴ Note that in Mauritian Creole, a French-based Creole language spoken in Mauritius Island, *kote* ‘where’ cannot occur with the complementizer *ki* ‘that’, as in (i).

(i) ***Kote ki** nu pe ale? Mauritian
 where that 1PL PROGR go
 ‘Where are we going?’
 (adapted from Adone & Vainikka, 1999: 79)

Adone & Vainikka (ibid.) suggest that *kote* ‘where’ must be in C°, and not in SpecCP as *kisana* ‘who’, *kimanyer* ‘how’ and *kifer* ‘why’, which occur with *ki*, because this wh-word is “monomorphemic and thus “lighter” than the other wh-phrases”, making plausible a “cliticization analysis”.

I believe that this is not the case in CVC, since *undi* has the same morphemic weight as *kusé* ‘what’ or is even ‘heavier’ than *ken* ‘who’.

2.3.2.6. Ki N

In addition to the *wh*-words we have seen, CVC also allows *wh*-phrases in the form of *ki N* ‘which N’ to form *wh*-questions. In this case, the questioned element can play any grammatical function, as in (95)-(102).

- (95) [SBJ **Ki mudjeris**] ki papia ku nha pai?
 which women that talk(PFV) with POSS.1SG father
 ‘Which women talked with my father?’
- (96) N ka sabe [CP [SBJ **ki mudjeris**] ki fase
 1SG NEG know(IPFV) which women that do(PFV)
 kel katxupa sabi-(li)].
 DEM katxupa good-PROX
 ‘I don’t know which women cooked this nice katxupa.’
- (97) [DO **Ki librus**] ki Djon kunpra?
 which books that Djon buy(PFV)
 ‘Which books did Djon buy?’
- (98) N purgunta-u [DO **ki palabron**] ki Djon da.
 1SG ask(PFV)-2SG which slang.word that Djon give(PFV)
 ‘I asked you which slang word Djon said.’
- (99) [DO **Kantu dinheru**] ki bu ta meste?
 how.much money that 2SG IPFV need
 ‘How much money do you need?’
- (100) [OBLNuc1 **Ku ki mininas**] ki bu papia na festa?
 with which girls that 2SG talk(PFV) in party
 ‘With which girls did you talk to at the party?’

- (101) [OBLModif. **Ki dia**]⁵⁵ ki Maria ta txiga?
 which day that Maria IPFV arrive
 Lit.: ‘Which day does Maria arrive?’
 ‘When does Maria arrive?’

- (102) [OBLLoc **Na ki sinema**] ki Maria staba?
 in which cinema that Maria be(PST)
 ‘In which cinema was Maria?’

The *ki* ‘which’ that occurs in wh-questions is a nominal specifier, i.e. an operator, and must be distinguished from the *ki* ‘that’ that fills C’.

In what concerns the nature of the wh-word *ki*, I will show that, against Munaro & Pollock’s (2005) proposal for Modern French and for Northern Italian Dialects, *ki* does not behave as a clitic. In fact, *ki* cannot be separated by epithets, as in (103), and it cannot occur in isolation, as in (104a.), contrary to the wh-word *kusé* in (104b.), which evidences its clitic status.

- (103) **Ki*, pa bo, mudjer ki Djon odja?
 which for 2SG woman that Djon see(PFV)
 *‘Which, for you, woman did Djon see?’

- (104) a. **Ki*?
 ‘*Which?’
 b. *Kusé*?
 ‘What?’

⁵⁵ In this case, the ‘quantity of time’ can be signaled from the most specific to the vaguest, depending on the noun at stake, as in (i). Nevertheless, the expression *ki dia* seems to be the prototypical one for ‘when’ in CVC.

(i) [Ki minutu/ora/dia/sumana/mes/stason/anu/seklu/épuka/tenpu]
 which minute/hour/day/week/month/station/year/century/era/time
 ki kel pulítiku-li prizenta si pruposta?
 that DEM politician-PROX present(PFV) POSS.3SG proposal
 Lit.: ‘Which minute/hour/day/week/month/station/year/century/era/time did this politician presented his proposal?’
 ‘At which minute/hour/day/week/month/station/year/century/era/time did this ...’
 ‘When did this politician ...?’

However, according to Munaro & Pollock's (2005: 557)⁵⁶ analysis, if *ki* were a wh-clitic, it could occur several sentence boundaries away from its original position (thus, differing from its pronominal counterparts), as in French (cf. (105), adapted from Munaro & Pollock, 2005, ex. (42)).

- (105) [Qu]_i'as-tu dit [_{CP} que Marie pensait [_{CP} que Jacques dirait [_{CP} que Paul avait fait *t_i*]]]?
 'What did you say that Marie thought that Jacques would say that Paul did?'

But, as shown in (106a.), the wh-word *ki* cannot cross three clausal boundaries; yielding ungrammatical sentences (confront with the grammatical counterpart with *kusé* in (106b.)).

- (106) a. ***Ki** bu fla [_{CP} ma Maria atxa
 which 2SG say(PFV) that Maria think(PFV)
 [_{CP} ma Djon fla [_{CP} ma Zé fase [~~ki~~ ...]]]]?
 that Djon say(PFV) that Zé do(PFV)
 Lit.: 'Which did you say that Maria thought that Djon said that Zé did?'
- b. **Kusé** ki bu fla [_{CP} ma Maria atxa
 what that 2SG say(PFV) that Maria think(PFV)
 [_{CP} ma Djon fla [_{CP} ma Zé fase [*kusé*]]]]?
 that Djon say(PFV) that Zé do(PFV)
 'What did you say that Maria thought that Djon said that Zé did?'

We can therefore conclude that, in CVC, *ki* does not behave like a clitic; instead, it is a wh-element that selects for a NP as its complement, in order to form a wh-phrase.

If we take EP *que* 'which', from which *ki* derives, we see that it behaves differently from *ki*, occurring isolated, i.e. with a phonetically empty N, as long as there is SBJ-V inversion, as in (107).

⁵⁶ In their analysis there are two positions for wh-Operators in the left periphery of the sentence: a lower one (OP₁), above TopP, for existential quantifiers, and a higher one (OP₂), above ForceP, for the disjunction operators, and some of these are clitics (such as *que*, in French, which cliticizes in a null Op).

- (107) a. *Que o Pedro ofereceu à Joana? EP
 which the Pedro give(PFV) to Joana
 ‘*Which did Pedro give to Joana?’
- b. Que ofereceu o Pedro à Joana?
 Lit.: ‘Which give Pedro to Joana?’
 ‘What did Pedro give to Joana?’
 (adapted from Ambar, 1992: 187-8)

According to Ambar (1992), the contrast between (107a.) and (107b.) is due to the fact that, in EP, the phonetically null N that occurs to the right of *que* functions as an empty category that must be properly governed⁵⁷ in order to render the sentence grammatical. In EP this category must be governed by V (*oferecer*), which moves to C°, and not by *que* (Ambar, id., p. 221, refers in a footnote that *que* does not govern properly the empty category because it is a defective lexical category).

As mentioned in the introduction to this chapter and exemplified in (1b.), repeated here as (108), SBJ-V inversion is highly restricted in CVC⁵⁸.

- (108) *[_{DO} Ki] ki [_V kume] [_{SBJ} katxor]?
 which that eat(PFV) dog
 Lit.: ‘Which did eat the dog?’

⁵⁷ See Chomsky (1981: 250) on the identification of empty categories, within the framework of Lectures on Government and Binding (LGB), proposing the Empty Category Principle (ECP), as in (i):

(i) “[_α e] must be governed (in some sense)”.

In (1986a: 16), Chomsky restates the ECP, suggesting that this principle “does not hold of the pronominal elements PRO and pro or any empty operator, but it does hold of A-bound and \bar{A} -bound trace”. At this stage, the ECP establishes that a non-pronominal empty category has to be ‘properly governed’, and ‘proper government’ is defined as in (ii):

Proper Government

(ii) “ α properly governs β iff α θ -governs or antecedent-governs β ” (id., p. 17).

Within the MP framework, Chomsky (1995b: 141), the ECP is taken as a condition on chains, keeping the premises expressed in the *Barriers*: “not applicable to the empty categories PRO, *pro*, and *e*, but only to trace”. In other words, traces still have to be properly governed, “both antecedent- and head-governed by a lexical feature (i.e. not C)” (op. cit., p. 91).

⁵⁸ Note that it is not because C° is already filled by the complementizer *ki* that the sentence in (108) is ungrammatical. This complementizer can be absent and yet the sentence remains ungrammatical, as in (i):

(i) *Ki kume katxor?
 which eat(PFV) dog
 Lit.: ‘Which ate the dog?’

As V-to-C movement is rejected in CVC, and the wh-pronoun *ki* lacks referential content (as its EP counterpart⁵⁹), there is no way of licensing the null N leading to a crashing derivation.

2.4. DP Structure

In the literature on Creole languages it is often referred that these languages are morphologically ‘poor’, i.e. they exhibit almost no verbal morphology and gender or number markers (cf. DeGraff, 1999 and 2001). In CVC, however, “plural suffixation on nominal stems (...) is a highly productive process regulated by principled licensing conditions”, especially animacy, definiteness and episodic tense⁶⁰ (Baptista, 2002: 35).

In this section I intend to present a brief description of the DP structure in CVC, focusing on the relation between nouns and relative clauses⁶¹. I will assume that the DPs of CVC have a non-split structure, i.e. they do not project the functional categories of [Number] and [Gender], and that [Number] is a formal feature of D° and [Gender] is lexically marked⁶².

⁵⁹ Adapting Ambar’s (1992: 189-190) analysis for EP to CVC, *ki* is a nominal element underspecified for the semantic features ([±r(eferential)]), being specified only by the noun that follows it.

⁶⁰ ‘Animacy’ is arguably a distinctive independent feature of nouns.

⁶¹ For a more detailed treatment of the nominal domain in CVC, I refer the reader to Baptista (2002: 24-74), who studies NPs reduplication, possessives, adjectives, and comparative constructions. See also Baptista (2007) for a syntactic and semantic analysis of the DP in this language.

⁶² The nouns (and adjectives) of CVC exhibit a non-systematic [Feminine] gender marking with suffix *-a*. Nevertheless, we can assume that the classification of these categories as [+Feminine] obeys to the nature [+Human] of the denoted or modified entities, as in (i) and (ii):

- (i) Kel minina-la sa ta resa.
DEM girl-DIST PROGR pray
‘That girl is praying.’
- (ii) a. Minda e kauberdina/kauberdianu.
Minda be Capeverdean.F/Capeverdean.M
‘Minda is Capeverdean.’
- b. Kel bolsa-li e bunitu/*bunita.
DEM purse-PROX be nice.M/nice.F
‘This purse is nice.’

Another usual way to mark [Feminine] gender in CVC is to resort to the word *femia* ‘female’, attaching it to the noun it modifies, as in (iii).

- (iii) Nha fidju-femia sta na Portugal.
POSS.1SG son-female be(IPFV) in Portugal
‘My daughter is in Portugal.’

2.4.1. Determiners and Quantifiers

CVC displays a DP that can be filled either by an indefinite article (*un(s)*)⁶³ ‘a/one’, as in (109), demonstratives (*es ... (-li)*, *kel(s) ... (-li/la)* ‘this(these) ... here’, *kel-li/la*)⁶⁴ ‘this/that’, as in (110), the noun itself (when bare⁶⁵), as in (111), and a definite article *kel(s)* ‘the’, as in (112).

- (109) **Un** omi sa ta furta loja.
 DET man PROGR steal store
 ‘A man is stealing the store.’

- (110) a. **Es** mininu (**li**) ka sabe kanta.
 DEM boy PROX NEG know(IPFV) sing
 ‘This boy doesn’t know how to sing.’

- b. **Es** mudjeris (**li**) ta fase un katxupa sabi.
 DEM women PROX IPFV do a katxupa good
 ‘These women cook a nice katxupa.’

- c. N ta bai **kel** kutelu-**la**.
 1SG IPFV go DEM village-DIST
 ‘I will go to that small village.’

⁶³ Note that, in CVC, the word *uma* is never the [+Feminine] counterpart of *un* ‘a/one’, despite the fact that Brüser & Santos (2002: 30) claim *uma* to be an emphatic variety of the indefinite article [*un*]. I will follow Veiga (2000: 143), who argues that *uma* “marks the augmentative degree of nouns and adjectives; it has nothing to do with the numeral *un* «un», or with the indefinite article *un* «le»” (my translation). In fact, in CVC, *uma* can only be interpreted as an intensification / augmentation of the noun it precedes, being equivalent to ‘big/huge’, as in (i).

(i) Dja nu kába piskába, nu sa ta voltába pa téra,
 already 1PL finish(PFV) fish(PST) 1PL PROGR come.back(PST) to land
 surji kel **uma** tenpural.
 arise(PFV) DET AUG storm
 ‘We have just fished; we were coming back to land, when a huge storm came up.’
 (adapted from Brüser & Santos, 2002: 800)

⁶⁴ Kriyol (the Guinea-Bissau Creole) seems to display a very similar behavior, also using locative deictics – *li/la* – in co-occurrence with demonstratives (vd. Kihm, 1994: 140).

⁶⁵ See Alexandre & Soares (2005) and Baptista (2007) for a treatment of bare noun phrases in CVC.

d. Abo dja bu le **kes** libru-li?
 2SG already 2SG read(PFV) DEM book-PROX
 ‘Have you already read these books?’

e. Nha pai sta duensi,
 POSS.1SG father be(IPFV) ill
 e pa **ke-la** k’e ka ta trabadja.
 be for DEM-DIST that-3SG NEG IPFV work
 ‘My father is sick, that is why he doesn’t work.’

(111) **Katxor** gosta di karni.
 dog like(IPFV) of meat
 ‘A dog/Dogs like(s) meat.’

(112) Nhos atxa **kel** mininu branku?
 2PL find(PFV) DET boy white
 ‘Did you find the white boy?’

As Alexandre & Soares (2005) show, the indefinite article *un(s)*, in (109), and the demonstrative *es... (-li)*, in (110), show a fairly stable syntactic and semantic behaviour. Particularly, the indefinite article seems to occur whenever one needs to establish a contrast between two members of the same species or to introduce new information in narratives (cf. (113) and (114), respectively).

(113) **Un fijo** run tâ danâ **ôto**.
 a fig bad IPFV ruin other
 ‘A bad fig ruins all the others.’
 (Costa & Duarte, 1967: 320)

(114) Alí un bes tinha **un Lobo** k’un **Xibinhu** (...).
 there a time have(IPFV) a wolf with-a kid.
 ‘Once upon a time, there was a Wolf and a Kid.’
 (Lima, 2000: 23)

As for the demonstratives, the status of *es* ... (*li*) offers no doubt, since even when it occurs without the deictic *-li*, it behaves as a demonstrative (cf. (115)).

- (115) Y **es** **raspósta** debe buskadu ku diterminason
 and DEM answer should look-for.du with determination
 di ken ki sabe ma el ta atxadu.
 of who that know that 3SG IPFV find.du
 ‘And this answer should be looked for with the determination of one who knows
 that it will be found.’
 (Silva, 1998: 114)

However, the status of the definite article of CVC – *kel(s)* – seems to be more problematic. Although some scholars, as Brüser & Santos (2002), say that CVC does not exhibit a definite article, there are some others (see Baptista 2002 and 2007, and Alexandre & Soares, 2005) suggesting that *kel(s)* is already the definite article of the language.

In fact, the demonstrative status of *kel(s)* is only clear cut when it co-occurs with the deictic *-li/-la*. According to Brüser & Santos (2002: 35), the semantic difference between the two demonstratives (*es*, invariable in number, and *kel*, which varies in number) is that *kel* does not say anything about the spatial or temporal proximity or distance of the referent in question, while *es* is always ‘proximal’. This is why *es* can only be combined with the demonstrative adverb *li*, whereas *kel(s)* may be combined either with *-li* or *-la*, as (116) and (117) exemplify.

- (116) **Kel** **mudjer-li** e bunita. **Ke(l)** ***(la)** e margos.
 DEM woman-PROX be pretty DEM DIST be ugly
 ‘This woman is beautiful. That one is ugly.’

- (117) **Es** **grupu** **li/*la** inda sta fracu.
 DEM group PROX/DIST still be weak
 ‘This group is still weak.’
 (CVMusicMusic.com)

As (116) shows, only a demonstrative proper may occur in non-modified N ellipses. According to Alexandre & Soares (2005), the element *kel(s)* without the deictic *-li/la* is acquiring the status of a definite article, conveying [Definiteness] and [Number]⁶⁶. The impossible co-occurrence of *kel(s)* alone and a possessive pronoun (cf. (118a.)) proves that they are competing for the same position, i.e. both mark for [Definiteness]⁶⁷, whereas the demonstrative *kel(s) ... -li/la* does not, due to its deictic function.

- (118) a. *Abo dja odja **kes nha** **fidju femia?**
 2SG already see(PFV) DET POSS.1SG son female
 Lit.: ‘Have you seen the daughters of mine?’
- b. Abo dja odja **kes nha** **fidju femia-li?**
 2SG already see(PFV) DEM POSS.1SG son female-PROX
 ‘Have you seen these daughters of mine?’
 (adapted from Alexandre & Soares, 2005: 340)

In (118), *kes* ‘these’ is licensed only if the deictic *-li* occurs at the right edge of the DP. Another argument for the definite article status of *kel(s)* is its ability to license noun ellipsis⁶⁸ when there is overt material to the right of the noun (e.g. a relative clause or a possessive complement), as in (119).

- (119) a. Kunpra-m un kálsa mitanti
 Buy-1SG a trouser similar
 [DP **kel** ki N odjá-u ku el (***li/la**)] ónti.
 DET that 1SG see(PFV)-2SG with 3SG PROX/DIST yesterday
 Lit.: ‘Buy me a trouser just like the one I saw you with it yesterday.’
 ‘Buy me trousers like the ones I saw you with yesterday.’

⁶⁶ *Kel(s)* is still the demonstrative, although “speakers may use existing forms to express new meanings” (cf. Bruyn, 1995: 24).

⁶⁷ Note that the indefinite article and the possessive may co-occur, because they don’t compete (cf. (i), which contrasts with (118) in the text).

(i) **Un nha** migu ka skrebe-m.
 a POSS.1SG friend NEG write(PFV)-1SG
 Lit.: ‘A friend of mine didn’t write to me.’
 ‘No friend of mine wrote me.’

⁶⁸ See Raposo (2003) on this topic for EP.

b. Si káru ê mitanti [DP **kel** di bo (*li/la)],
 POSS.3SG car be similar DET of POSS.2SG PROX/DIST
 más [DP **kel** di bo (*li/la)] inda ê más bodóna.
 but DET of POSS.2SG PROX/DIST even be more better
 ‘His/Her car is like yours, but yours is even better.’
 (adapted from Brüser & Santos, 2002: 465)

Let us stress, however, that the use of *kel(s)* as a definite article is not systematic, i.e. the DP interpretation as [+definite, +specific] can also be obtained by a bare noun (actually, this is what seems to prevail in CVC, just like in other related creole languages, such as Kriyol and Santome (cf. Kihm, 1994, and Alexandre & Hagemeijer, 2007, respectively)). The low rate of *kel(s)* as a definite article may be due to the fact that the change from a demonstrative to a definite article is still active (cf. the diachronic development of articles in Romance and English)⁶⁹.

I suggest, therefore, that synchronically the CVC repertoire of articles and demonstratives is the one listed in table 5.

Table 5. Current articles and demonstratives of CVC

		Singular	Plural
Articles	Indefinites	Un	Uns
	Definites	Kel	Kes
Demonstratives		Es ... (li)	-
		Kel-li/la	-
		Kel ... li/la	Kes ... li/la

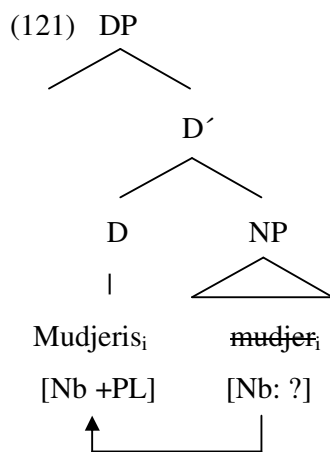
Although Baptista (2002: 35) claims that “[plural suffixation] is a highly productive process”, I will assume that the expression of [Number] in CVC is restricted to D°, which also encodes [Definiteness] and [Specificity] (following Alexandre & Soares,

⁶⁹ Such a change is also described by Maurer (1998: 155, fn. 25) for Papiamentu: “The oldest variant of the definite article [*e*] is *es* (...). This shows that the etymology of the Papiamentu definite article does not come from the Spanish, but from the Portuguese or Spanish demonstrative determiner *este* or *esse/ese*” (my translation).

See also the cases of the Portuguese definite article formed after the latin demonstrative pronoun *ille* > *ello/ella* > *lo(s)/la(s)* > *o(s)/a(s)* and the change of Old English, in which there wasn’t a definite article, into the Contemporary English *this* > *the*.

2005⁷⁰). A direct consequence of this proposal is that [Number] must be checked in D°, i.e. in the left edge of the DP. This means that if there is a D° [Nb +PL] not lexically filled, the formal feature of [Number] must be checked by a noun that occurs in the initial Numeration underspecified for it (i.e. [Nb: ?]), moving up to D°, as in (121) for the DP_{SBJ} in sentence (120).

- (120) [D_{PSBJ} Mudjeris] ta tra mininus banbudu.
 Women IPFV bring boys back(?)⁷¹
 ‘The women bring their sons on their back.’



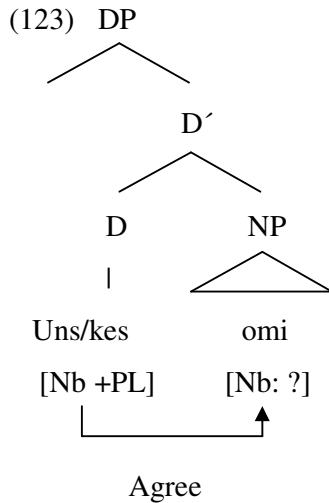
Suggesting that the Move operation in (121) accounts correctly for [Number] checking in CVC, I am assuming Longobardi’s (1994) proposal, according to which “a ‘nominal expression’ is an argument only if it is introduced by a category D”, and claiming that the [Number] feature of the subject *mudjeris* ‘women’ “(...) crucially rely on the D position in order to define their meaning with respect to number” (cf. Longobardi, 1994: 620-1), i.e. the countable noun *mudjeris* has to raise to D° in order to check its [Number] feature and, especially, to check aspectual formal features (such as [specific]) against Asp°.

⁷⁰ For an alternative analysis of [number] in CVC, see Castro & Pratas (2003), within the framework of Distributed Morphology.

⁷¹ According to Brüser & Santos (2002: 91), the etymology of this word is opaque, since it can be related to “Portuguese LOMBO and/or from Mancanha BAMB, Manjaco BAMB, Bainuco BAMBA, etc., with the meaning of the Creole verb, cf. Rougé 1988, s.v. bambu” (my translation).

If D° is filled with some articles (such as *un(s)* or *kel(s)*), the noun does not have to move up to check its formal feature of [Number] and an Agree operation takes place, as in (123) for the DP_{SBJ} in (122).

- (122) [DP_{SBJ} Uns/Kes omi di Gubernu] kontrata-m.
 A/The man of Government hire(PFV)-1SG
 ‘Some/The men of the Government hired me.’



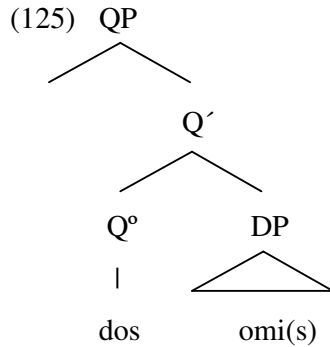
In CVC, however, there are cases in which a filled D° [Nb +PL] co-occurs with a noun that morphologically expresses plural, as in *kes mudjeris* ‘the women’. One might adopt two different approaches to account for these cases. One might argue that the pronominal element *kes* is still a demonstrative and, therefore, its [Number] marking is independent from the [Number] information on the noun)⁷². Or, taking *kes* to be a definite article proper, one might claim that the noun *mudjeris* comes from the Lexicon already marked for plural number ([Nb +PL]).

The hypothesis that D° encodes [number] is also supported by quantifiers in CVC. I will assume Giusti’s (1997) analysis of quantifiers, according to whom “they are heads (Q), selecting a DP and projecting a QP”, as in (125) for a sentence like (124).

⁷² I am assuming Giusti’s (1997) proposal for determiners, and particularly for demonstratives. Based on several unrelated languages, she argues that demonstratives and articles belong to a different class, defending that “demonstratives are lexical elements inserted in a low specifier and further moved to SpecDP” (p. 113).

Note, however, that this double plural marking is not very common in the variety under consideration. Probably, we have two competing grammars at stake here.

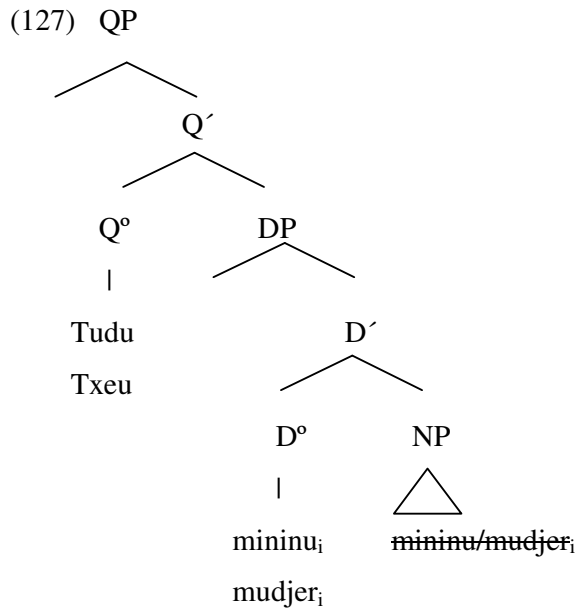
- (124) N odja [DP **dos omi(s)**] ta furta galinha.
 1SG see(PFV) two man IPFV steal hen
 ‘I saw two men stealing chickens.’



(structure adapted from Giusti, 1997: 114)

Sentence (124) shows that the numeral *dos* ‘two’, being already marked for plural number ([+PL]), establishes a local Agree relation with its complement (DP), checking the formal feature [Number] on D°. Thus, when an invariable quantifier occurs in the initial Numeration, as *tudu* ‘all’ and *txeu* ‘many’, which may precede a singular or a plural noun, we may suggest that these quantifiers are underspecified for [Number] ([Nb: ?]), and the number marking can be overtly expressed by D°, as in (126), with the partial representation (127).

- (126) a. Parmanhan ta dadu ola di funaná
 morning IPFV give.du class of funaná
 pa [DP **tudu mininu(s)**] ki kre prende badja.
 for all boy(s) that want(IPFV) learn dance
 ‘Tomorrow morning there are classes of funaná for all the kids that want to learn how to dance.’
- b. [DP **Txeu mudjer(is)**] ta badja sabi.
 many woman(women) IPFV dance well
 ‘Many women dance well.’



Moreover, quantifiers such as *argun(s)* ‘some’, which may vary in [Number] marking ([±SG]), do not block plural overt morphology on the noun to their right, as in (128).

- (128) [_{DP} **Arguns mininu(s)** di es skola] dja sabe skrebe.
 some boy(s) of DEM school already know(IPFV) write
 ‘Some boys of this school already know how to write.’

Finally, in CVC, possessives are a further piece of evidence favoring an analysis of D° encoding [Number], since in this language possessives cannot co-occur with the definite article *kes* ‘the’, as in (129a.), and exhibit plural overt morphology blocking it in the noun, as (129b.) illustrates.

- (129) a. *Abo dja odja **kes nha** fidju femia?
 2SG already see(PFV) DEM POSS.1SG son female
 Lit.: ‘Have you seen the my daughters?’
- b. [_{DP} **Nhas** fidju-femia(*s)] ka ten maridu.
 POSS.1PL son-female NEG have(IPFV) husband
 ‘My daughters are single.’

Considering these facts, I will suggest that the possessives of CVC are projected as determiners⁷³, competing for the same position of the definite article *kel/kes*, since they both mark [Definiteness], and the noun stays in situ in the complement position of D° (such as *fidju femia* in (129b.)).

2.4.2. Relative clauses

In this section I intend to focus on the right edge of the noun, particularly, on the structure of relative clauses. Before proceeding, I will show that CVC is a head-initial language, i.e. the complements and modifiers of the noun occur to its right, namely, adjectives, relative clauses, prepositioned complements and deictics (cf. (130)-(133)).

- (130) Nhu Palu ten [DP un mudjer [AP bunitu(a)]].
 mister Palu have(IPFV) a woman pretty.M(F)
 ‘Mr. Palu has a pretty woman.’

- (131) N ka ta konxe [DP kel mudjer
 1SG NEG IPFV know DET woman
 [CPre_l ki tra kel nobidadi-li]].
 that bring(PFV) DEM news-PROX
 ‘I do not know the woman that brought this news.’

⁷³ Cf. Brito (2000b), for an analysis of possessives preceded or not by an article in BP, and Miguel (2004), for a comparative analysis between EP and French.

- (132) a. N ta bai [DP kasa [PP di Maria]]⁷⁴.

1SG IPFV go house of Maria

‘I am going to Maria’s place.’

- b. Maria ta xinti [DP vontadi [PP di ten kriansa]].

Maria IPFV feel will of have child

‘Maria wants to have kids.’

- (133) [DP Kel santxu-**li/la**] e runhu.

DEM monkey-PROX/DIST be ferocious

‘This/That monkey is ferocious.’

The deictics *li/la* ‘here/there’, which set the locus of reference, i.e. the proximity or distance of the referent with respect to the speaker⁷⁵, can occur separate from the noun

⁷⁴ As (132) shows, in CVC, the possessive complement is introduced by the preposition *di* ‘of’, but there are some contexts in which the possessive complement can be introduced by a possessive anaphor like *-l*, as in (i) and (ii).

- (i) Ba xinta dentu-**l** kasa.
go sit inside-POSS.3SG house
‘Go sit inside the house.’

- (ii) Nhu Lobu djobe pa un munti-**l** sinsa ki stába na un kántu-**l** kása.
mister Lobu look(PFV) at a pile-of ash that be(PST) in a corner-of house
‘Mr. Lobu looked at a pile of ashes that was in a corner of the house.’
(Brüser & Santos, 2002: 702)

According to Giorgi (2006: 1012), “the whole nominal projection containing a possessive anaphor works as an anaphoric item” and it is subject oriented. That is why the possessive complement *di Maria* of *kasa di Maria* ‘Maria’s home’ in (132) in the text cannot involve a possessive anaphor, as in (iii).

- (iii) N ta bai kasa **di/*-l** Maria.

Therefore, I diverge from Brüser & Santos (2002: 116), according to whom *-l* is a variant of *di* because it introduces an element that begins with a consonant and follows a non verbal element that ends in a vowel, as in “*kántu-l kása*, *dentu-l kása*, *karegádu-l banána*” (ibid.).

⁷⁵ This resembles French *-ci/-là*, as in (i) and (ii):

- (i) Ce livre-ci
‘This book’

(ii) Cette maison-là
‘That house’

We could assume, following Giusti’s (1997) analysis, that these deictics are demonstratives that do not move up to SpecDP, staying in a lower specifier position.

Wolof also exhibits a class of elements that resembles CVC deictics. According to Torrence (2005: 32), in the language “There are also prepositional/locative clitics, which encode location and distance. These are transparently related to the defective *fi*- locative and *ci* prepositional noun classes”:

they are attached to only when the noun is modified by an adjective (cf. (134a.)) or when it has a PP as its complement (cf. (134b.)).

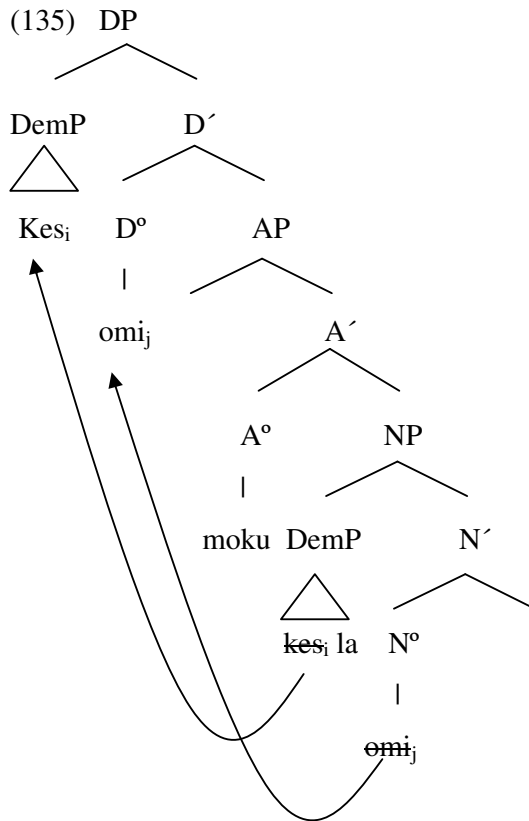
- (134) a. [_{DP} Kes omi (***la**) moku **la**] sa ta durmi.
 DEM man DIST drunk DIST PROGR sleep
 ‘Those drunken men are sleeping.’
- b. [_{DP} Kel fregeza (***li**) di Praia **li**] ta konxe longisa!
 DEM client PROX of Praia PROX IPFV know sausage
 ‘This client from Praia knows the sausages!’
- c. [_{DP} Kel minina **li** [_{CP} ki Djon gosta d-el] (***li**)]
 DEM girl PROX that Djon like of-3SG PROX
 ta bai Fransa.
 IPFV go France
 ‘This girl, of whom Djon likes, goes to France.’

Being a discontinuous element⁷⁶, *li/la* heads Dem° and *kel(s)* is inserted in SpecDemP. I will assume that this deictic is generated in SpecNP and *kel(s)* has to move up to SpecDP in order to check the [Number] feature, while *li/la* stays stranded in Dem° position in (135). The subject DPs in (134a. and b.) correspond to the structures in (135) and (136), respectively.

Locative Clitics

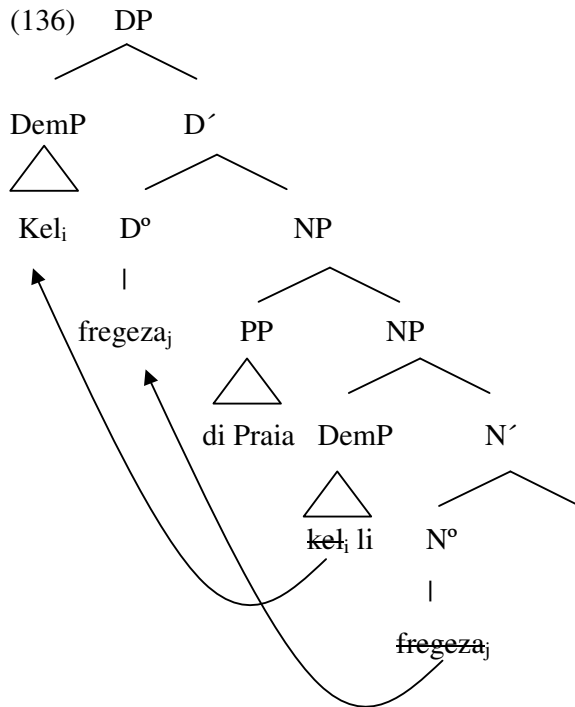
	f-series	c-series
proximal	Fi	Ci
distal	Fa	Ca

⁷⁶ According to Kihm (1994: 140-141), Kriyol exhibits the same elements (*es ... li, kil ... la*), displaying a similar syntactic and pragmatic behavior.

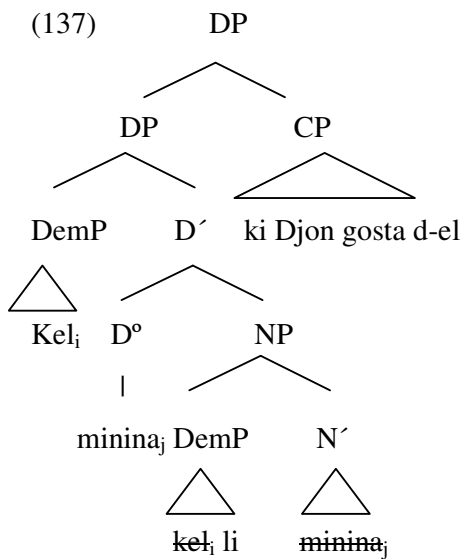


Adopting Cinque's (1995) proposal on the order of adjectives in Romance languages, (135) shows that in the DP of CVC, a language which does not display evidence for the projection of the functional categories [Number] and [Gender], the noun *omi* 'man' moves up to D° to check its [Number], yielding the linear order [_N *omi*] [_A *moku*].

The order between the head noun *fregeza* 'client' and its prepositional modifier *di Praia* 'of Praia' in (134b.) exhibits the N°-to-D° movement mentioned for (135) above, deriving the convergent linear order *kel fregeza di Praia li*, as represented in (136).



However, (134c.) shows that the deictic *li/la* cannot occur at the right edge of a relativized DP. Such a fact may be an argument favoring the classic analysis of appositive relative clauses⁷⁷, according to which the CP_{rel} adjoins to the DP it modifies, as in (137).

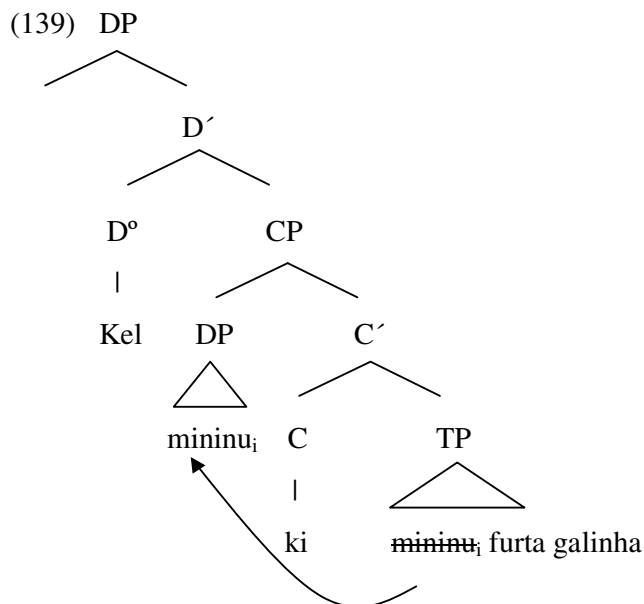


⁷⁷ When the antecedent involves a demonstrative element, I am assuming that it can only be modified by a non-restrictive relative clause, because the set of entities denoted by the noun is already singularized by the demonstrative.

Thus, the occurrence of a deictic in a relativized DP, as in (137), argues against Kayne’s (1994) proposal for (restrictive and nonrestrictive) relative clauses. According to this author, the head raising analysis accounts for these constructions, involving a structure of the form $[_{DP} D^{\circ} CP]$, and the only difference between restrictive and appositive relative clauses shows up “at LF component but do not differ structurally in the overt syntax” (id., p. 111).

Despite rejecting Kayne’s (1994) proposal for non-restrictive relative clauses, I will claim that his analysis correctly accounts for CVC restrictive relative clauses (cf. chap. 4, section 4.3.). The derivation of a relativized DP, as the one shown in (138), will proceed as in (139).

- (138) Kel mininu ki furta galinha kebra perna.
 DET boy that steal(PFV) hen break(PFV) leg
 ‘The boys that stole the chickens broke their legs.’



Along the lines of Bianchi’s (2002a) proposal, *mininu* ‘boy’ in (139) is a DP that moves up to SpecCP_{rel} in order to be accessible to [Number] checking from D° (see section 2.4.1 above for the presence of this formal feature in D°).

2.5. The complementizer system

In this section I will address the so called left periphery of the clause structure in CVC, namely its complementizer system. This creole exhibits syntactic constructions that require the projection of the CP, which, according to Cheng (1991), will identify a sentence. With her *Clause Typing Hypothesis*, Cheng proposes that languages may be classified considering the way that typing operates, i.e. through Move (e.g. English⁷⁸) or Merge (e.g. Mandarin⁷⁹), while some other languages, such as Egyptian Arabic and Bahasa Indonesia, exhibit mixed typology.

First, I will present a description of the elements that may occur in C° in CVC; second, I will propose a feature-based analysis of C° elements.

2.5.1. The data

2.5.1.1. The complementizer *di* ‘of’

The complementizer *di* ‘of’ introduces complement clauses of Nouns and Adjectives, as examples (140) and (141) show.

- (140) a. Kel [_N ipotis] [_{CP} **di** mininus bai Lisbua di avion]
DET hypothesis of boys go Lisboa of plane
e sa ta da-l grandi ligria.
3SG PROGR give-3SG big joy
Lit.: ‘The possibility that the boys go to Lisboa by plane is leaving him happy.’
- b. N_i tene [_N gana] [_{CP} **di** --_i kume pon ku longisa.
1SG have(IPFV) will of eat bread with sausage
Lit.: ‘I have will of eating bread with sausage.’
‘I want to eat bread with sausage.’

⁷⁸ English does not exhibit question particles and then C° acquires [+Wh] feature only if overt wh-movement applies (before Spell-Out), i.e. a wh-XP moves to SpecCP, for Agree to operate.

⁷⁹ This is why in Mandarin all wh-questions are in situ and there is only wh-movement in LF.

(141) a. Kel trabadju-li e [A difísil] [CP **di** bo fase(-l) na dos dia].
 DEM work-PROX be difficult of 2SG do-3SG in two day
 ‘This work is difficult for you to do in two days.’

b. Es kontentésa ki N sa ta xinti dentu mi
 DEM happiness that 1SG PROGR feel inside me
 ê [A difísil] [CP **di** -- splika]!
 be difficult of explain
 ‘This happiness that I feel inside of me is difficult to explain!’
 (Brüser and Santos, 2002: 351)

Since CVC does not exhibit an infinitival morpheme to signal the tenseless character of sentences (as English *to* or Portuguese *-r*), we have to resort to syntactic tests to find out whether the embedded clause is a full or a defective domain, such as (i) the overt presence of an embedded subject and (ii) the occurrence of negation in the embedded domain.

First, sentences (140a.) and (141a.) above exhibit an overt embedded subject (*mininus* ‘boys’ and *bo* ‘you’), which must occur in a finite environment in order to have their Case checked. Second, sentences (140b.) and (141b.), although lacking an overt subject⁸⁰, allow for a negation marker which precedes Asp to show up in the embedded clause, as (142) illustrates.

(142) N tene gana [CP di **ka** fase nada pa-N djuda Maria].
 1SG have will of NEG do nothing for-1SG help Maria
 ‘I wish I won’t do a thing to help Maria.’

Based on these tests, I will assume that *di* is underspecified for the $[\pm T]$ feature, selecting for a defective temporal domain⁸¹. Moreover, both embedded verbs in

⁸⁰ I will not argue whether this null subject is either PRO or pro. Instead, I will follow Pratas (2007: 325): “The main conclusion has been that there is no PRO in Capeverdean, at least in the traditional sense of the necessary subject of infinitival clauses. This implied the assumption of Hornstein’s (1999) proposal of a Movement Theory of Control, which predicts that the null subjects of non-finite clauses are in fact traces of DP movement”.

⁸¹ Duarte et al. (2005: 550) argue that, in these cases, C° involves a $[\iota T]$ feature that functions as the “syntactic command that aims that the tense of these domains be computed for the event point of the matrix clause” (my translation). The authors present us a detailed analysis of C in complement clauses in EP using Pesetsky and Torrego’s (2001) framework of interpretable vs. uninterpretable features.

sentences (140a.) and (141a.) – *bai* ‘to go’ and *fase* ‘to do’ – allow for the opposition Perfective (\emptyset) / Imperfective (*ta*) in independent domains, as in (143).

- (143) a. Mininus \emptyset /**ta** bai Praia na hiasi.
 boys PFV/IPFV go Praia in van
 ‘The boys went/go to Praia by car.’

- b. Bo \emptyset /**ta** fase es trabadju dretu.
 2SG PFV/IPFV do DEM work well
 ‘You did/do this work well.’

However, *bai* and *fase* in sentences (140a.) and (141a.) are not preceded by *ta* because the event point is located in the future, and they receive an imperfective interpretation.

Di can also be selected by epistemic verbs like *skese* ‘to forget’, introducing infinitival complement clauses (see particularly (144b.), for the ungrammaticality of the overt embedded subject):

- (144) a. E [v skese] [CP **di** tra kabalinhu rédia].
 3SG forget(PFV) of take little.horse rein
 ‘S/He forgot to take off the little horse’s rein.’
 (Brüser and Santos, 2002: 278)

- b. Nhos ka ta skese [CP di (***nhos**) kunpra ramedí].
 2PL NEG IPFV forget of 2PL buy medicine
 ‘Don’t you forget to buy the medicine.’

In these cases, the embedded subject cannot be overt because the TP domain has a defective [T].

2.5.1.2. The complementizer *ki* ‘that’

The complementizer *ki* ‘that’ usually introduces nominal and adjectival finite complement clauses, as in (145) and (146).

- (145) E [N verdadi] [CP **ki** tudu povu ten si kultura].
 be truth that every people have(IPFV) POSS.3SG culture
 ‘It is true that every people has its own culture’.

(Silva, 2005: 332)

- (146) Kel uma kalson la e [A klaru] [CP **ki** ka ta sirbi-m].
 DEM AUG trouser DIST be clear that NEG IPFV fit-1SG
 ‘Those big trousers, it is obvious that they don’t fit me’.

(Brüser and Santos, 2002: 292)

Ki is also the complementizer of matrix or embedded (fronted) wh-questions, as in (147), and introduces all headed relative clauses and cleft sentences, as in (148)-(149).

- (147) a. Ken/Kenha [C° **ki**] kunpra kel baka-li?
 who that buy(PFV) DEM cow-PROX
 ‘Who bought this cow?’

- b. N ka sabe [CP kenha **ki** kunpra kel baka-li].
 1SG NEG know(IPFV) who that buy(PFV) DEM cow-PROX
 ‘I don’t know who bought this cow.’

- (148) Ami N odja [DP mininu]_i [CP **ki** --_i furta galinha].
 1SG 1SG see(PFV) boy that steal hen
 ‘I saw the children who stole the chicken.’

- (149) [IP E kuskus seku [SC [CP **ki** Djon ka ta kume dretu]]].
 be couscous dry that Djon NEG IPFV eat well
 ‘It is dry couscous that Djon doesn’t like.’

As we can observe, CPs introduced by *ki* always involve the projection of a [+T], yielding finite clauses.

2.5.1.3. The complementizer *ma* ‘that’

The complementizer *ma* ‘that’ introduces finite complement clauses of declarative verbs like *fla* ‘to say’ (cf. (150)), of epistemic verbs such as *atxa* ‘to think’ (cf. (151)), perception verbs as *odja* ‘to see’ (cf. (152)), and raising verbs like *parse* ‘to seem’ (cf. (153)), allowing for an independent embedded tense⁸². This is shown in (151), for instance, where the matrix verb *atxa* is in the present whereas the embedded verb *djuga* expresses an action completed in the past.

- (150) Maria [v *fla*] [_{CP} **ma** ses fidju ta bai skola].
 Maria say(PFV) that POSS.3PL son IPFV go school
 ‘Maria said that her sons go to school.’

- (151) Nu [v *atxa*] [_{CP} **ma** mininu ka djuga bola n’es kau].
 1PL think(IPFV) that boy NEG play(PFV) ball in-DEM place
 ‘We think that the boys didn’t play ball in this place.’

- (152) Djon [v *odja*] [_{CP} **ma** Maria kunpra sukrinha].
 Djon see(PFV) that Maria buy(PFV) sweet
 ‘John saw that Mary bought sweets.’

- (153) Ta [v *parse*]-m [_{CP} **ma** bu sta mariadu].
 IPFV parecer-1SG that 2SG be bored
 ‘It seems to me that you are bored.’

Although *ma* is essentially a complementizer selected by (declarative, epistemic, perception and raising) verbs, some speakers accept it as an alternative to *ki* in finite sentences selected by nouns, as in (154) and confront with (145) and (146) above⁸³.

⁸² See also Pratas (2007: 314, table (366)).

⁸³ Interestingly, an informant told me that embedded sentences selected by epistemic verbs could also involve a complementizer *ki* instead of *ma*, as in (i).

(i) N ka ta atxa **ki/ma** Djon gosta di Maria.
 1SG NEG IPFV think that Djon like(IPFV) of Maria
 ‘I don’t think that Djon likes Maria.’

Nevertheless, according to that speaker, *ma* is preferred to *ki*.

- (154) E [N verdadi] [CP **ma** Maria kebra kopu].
 be(IPFV) truth that Maria break(PFV) glass
 ‘It is true that Maria broke the glass.’

This might be explained by the fact that the embedded sentences in (145), (146) and (154) are the subject of a copulative structure. In addition, note that *ma* and *ki* seem to share more similarities. In coordinate sentences that function as complement of declarative verbs (like *fla* ‘to say’ in (155) below), for instance, *ki* may introduce the second conjunct (thereby recovering *ma*)⁸⁴.

- (155) E [v fla] [CoordP [CP **ma** e mesteba ba Praia]
 3SG say(PFV) that 3SG need(PST) go Praia
 y [CP **ki** e ta saiba sais ora di madrugada]].
 and that 3SG IPFV leave(PST) six hour of morning
 ‘S/He said that s/he needed to go to Praia and that s/he would leave at six
 a.m.’.
 (Brüser and Santos, 2002: 327)

The competition between *ma* and *ki* in sentences selected by verbal elements might indicate that they may share some properties.

Another property of *ma* is that the subject of the embedded clause it introduces is obligatorily overt (cf. *es* ‘they’ in (156)), even when the embedded subject is co-referent with the matrix subject, as the indexing shows in (157)⁸⁵.

- (156) Kes mininufla [CP m’*(es) ka gosta di djuga bola].
 DET boy say(PFV) that.3PL NEG like(IPFV) of play ball
 ‘The boys said that they don’t like to play football.’

⁸⁴ Note, however, that some informants prefer the second conjunct to be introduced by *ma* also:

(i) Djon fla [CoordP [CP **ma** Maria mesteba ba Praia] y [CP **m’e** ta saiba sinku ora di madrugada]].

⁸⁵ Kouwenberg and Lefebvre (2007) suggest that Papiamentu’s *ku* (the equivalent of *ma* in CVC) introduces tensed clauses that require an overt subject (although they accept clauses with expletive subjects, which are null in Papiamentu).

- (157) Kel [artista]_i la atxa [CP ma [el]_{i/j} ka gusta di múzika].
 DEM artist DIST think(IPFV) that 3SG NEG like of music
 ‘That artist thinks that s/he doesn’t like music.’

Sentences (156) and (157) above show that the Avoid Pronoun Principle (see Chomsky, 1981) does not apply in CVC. This is what one expects from a non-Null Subject Language as CVC (confront non-NSLs as English and French with EP and other Null Subject Romance languages).

Furthermore, *ma* seems to allow for an embedded null referential subject when a wh-element is extracted out of the CP it was merged in. This is illustrated in (158), where the embedded subject *kenha* ‘who’ is extracted through the SpecCP_{ma} in its way up to SpecCP_{ki}. And, in this type of construction, when the embedded subject is overt, it must be referentially disjoint from the matrix subject, as the indexing shows in (159).

- (158) [Kenha]_i ki fla [CP ~~kenha~~_i [C° ma [--]_{i/*j} ta
 who that say(PFV) that IPFV
 djobeba minina ta badja]]?
 look(PST) girl IPFV dance
 ‘Who said that used to look at the girl dancing?’

- (159) [Kenha]_i ki fla [CP [C° m’[e]_{j/*i} ta djobeba
 who that say(PFV) that-3SG IPFV look(PST)
 minina ta badja]]?
 girl IPFV dance
 ‘Who said that he used to look at the girl dancing?’

Although Costa & Pratas (2008) claim that CVC exhibits an asymmetry in the null referential subject distribution because in embedded clauses the null referential subject is obligatorily null as long as it is co-referent with a wh-pronoun, but forbidden in all other contexts, I will argue that sentences (158) and (159) are not cases of Avoid Pronoun Principle, since a non-Null Subject Language such as English displays exactly the same interpretation pattern as CVC in (158) and (159). The embedded null subject of (158) is a syntactic variable and not a null pronominal element. Moreover, these sentences lend further support to treat *ma* as a [-Wh] complementizer, requiring that the

wh-element moves up to a [+Wh] SpecCP position (i.e., the one whose C° is filled with *ki* in the examples above).

2.5.1.4. The complementizer *pa* ‘for’

The complementizer *pa* ‘for’ introduces complement clauses of control verbs as *kre* ‘to want’, and the embedded subject shows disjoint reference from the matrix subject:

- (160) Bo [bu]_i [v kre] [CP **pa** [nu]_{j/*i} fase trabadju].
 2SG 2SG want(IPFV) for 1PL do work
 ‘You want us to do the work.’

Declarative verbs like *fla* ‘to say’ may also select for the complementizer *pa*, behaving just like the control verb *kre* above, since the embedded subject cannot be co-referent of the matrix subject (see also (162)⁸⁶ below, for the overt presence of an embedded subject) and the embedded temporal domain is independent of the matrix one (cf. (161b.), where the temporal adverbial *manhan* ‘tomorrow’ occurs in the embedded clause).

- (161) a. [Bu]_i [v fla]-m [CP **pa** [--]_{j/*i} ben obi
 2SG say(PFV)-1SG for come listen
 bo múzika nobu].
 POSS.2SG music new
 ‘You told me to come to listen to your new song.’
- b. Bu fla-m [CP **pa** [AdvP manhan] N ntrega trabadju].
 2SG say(PFV)-1SG for tomorrow 1SG deliver work
 ‘You told me to hand out the work tomorrow.’

⁸⁶ For embedded sentences like (162) in the text, Pratas (2007: 322) argues for an analysis of control structures, implementing Hornstein’s (1999) control movement approach. She further proposes that the clitic subject surfaces on T, being T not active, and that “the subject clitic is somehow licensed by the preposition *pa*”.

- (162) [E]_i [v fla] [CP **pa** [bu]_{j/*i} da-l un bokadinhu d'águ].
 3SG say(PFV) for 2SG give-3SG a little of.water
 'S/He said that you should give him some water.'
 (Brüser and Santos, 2002: 457)

Thus, I will argue that the complement clauses in sentence (160)-(162) have a complete T.

DeGraff (2007: 109) reaches a similar conclusion with respect to *pou* 'for' in Haitian Creole. He shows that *pou* "can also be a full clause with TMA markers preceding the embedded verb", as in (163) below. And DeGraff concludes that "*pou* cannot be unambiguously classified as an infinitive marker".

- (163) Li te ale nan fèt la Haitian Creole
 3SG PFV go LOC party DET
 pou li te ka fè yon ti danse...
 for 3SG PFV capable do IPFV little dance
 'S/He went to the party to dance a bit.'
 (adapted from DeGraff, *ibid.*)

Pa, as a complementizer, also introduces 'infinitival' relative clauses. This kind of structures can only operate over [-specific] Nouns and the sentence receives a modal (irrealis) interpretation, as in (164) and (165).

- (164) Kel minin la ka tene [DP **ningen/mininus**]_i
 DEM boy DIST NEG have(IPFV) nobody/children
 [CP [C° **pa** [SBJ --]_i brinka ku-el]].
 for play with-3SG
 Lit.: 'That boy doesn't have anybody/children to play with him.'
 'That boy doesn't have anyone/ any child to play with.'

- (165) Es ka tene [DP **nada/kumida**]_i [CP [C° **pa** kume [DO --]_i]].
 3PL NEG have(IPFV) nothing/food for eat
 Lit.: 'They don't have anything/food to eat.'
 'They don't have anything/food to eat.'

If a [+specific] Noun is used as the antecedent of a *pa* clause, the sentence is interpreted as a purpose clause instead of a relative construction. Note that, in (166), the embedded subject position may be overt, being filled with a pronoun co-referent with a DP in the matrix clause. This is evidence for excluding this kind of sentence from the relative clauses type⁸⁷.

- (166) Mininu tene [DP Djon ku Maria]_i
 boy have(IPFV) Djon with Maria
 [CP p'([es]_i) brinka ku-el].
 for-3PL play with-3SG
 'The boy has Djon and Maria to play with him.'
 '*The boy has Djon and Maria that play with him.'

2.5.1.5. The complementizer *pamodi* 'to/Ø'

The complementizer *pamodi* 'to/Ø' introduces finite factive complement clauses of Adjectives, i.e. the embedded sentence is taken to be true, as in (167) and (168), respectively.

- (167) N atxa [A rabes] [CP **pamodi** bu
 1SG find(IPFV) strange for.fact 2SG
 ka kume nha kumida].
 NEG eat POSS.1SG food
 'I regret the fact that you don't eat my food'.

- (168) N fika [A dimiradu] [CP **pamodi**/ki/*ma/*di
 1SG stay(PFV) surprise.du for.fact/that/of
 Maria leba si fidju pa spital].
 Maria take(PFV) POSS.3SG son to hospital
 'I was surprised by the fact that Maria had taken her son to the hospital.'

⁸⁷ If sentence (166) in the text were a relative clause, the embedded subject pronoun would be treated as a resumptive pronoun. Nevertheless, recall that CVC does not allow for subject resumptive pronouns, as shown in Alexandre (2006).

According to Brüser and Santos (2002: 553), *pamodi* only has two uses: (A) as an interrogative pronoun, in (169); (B) as an adverbial conjunction, in (170).

(169) **Pamodi** ki bu sta triste?
 why that 2SG be sad
 ‘Why are you sad?’

(170) Mi dja N bai (**pamodi** N tene presa).
 1SG already 1SG go because 1SG have hurry
 ‘I’ll go because I am in a hurry.’

However, the word *pamodi* that I am considering here introduces argument clauses and therefore it does not function as an adverbial conjunction.

2.5.1.6. The complementizer *si* ‘if’

The complementizer *si* ‘if’ introduces only indirect wh-questions. These clauses are tensed and the embedded subject may be disjoint from the matrix subject or co-referent with it (cf. (171a. and b.), respectively).

(171) a. [Djon]_i [_v purgunta]-m [_{CP} **si** [Maria]_{j/*i} gosta di múzika].
 Djon ask(PFV)-1SG if/whether Maria like(IPFV) of music
 ‘John asked me if Mary likes music.’

b. [Mininus]_i [_v purgunta] bedju [_{CP} **si** [es]_i pode kanta na festa].
 boys ask(PFV) old.man if 3PL can sing in party
 ‘The boys asked the old man whether they could sing at the party.’

2.5.1.7. The complementizer Ø

In CVC, Control and Exceptional Case Marking (ECM)⁸⁸ verbs, like *kre* ‘to want’ and *manda* ‘to order’, respectively, seem to select an embedded clause without an overtly filled C° position, as in (172) and (173). One possible explanation for these kinds of verbs is to say that they select for a CP whose C° is occupied by a Ø (null) complementizer⁸⁹.

- (172) Tudu algen ta [v kre] [CP [C° Ø] bai seu].
 every someone IPFV want go heaven
 ‘Everyone wants to go to heaven.’

- (173) Nha pai [v manda]-m [CP [C° Ø] kunpra uns bolinhu].
 POSS.1SG father order(PFV)-1SG buy a cookie
 ‘My father told me to buy some cookies.’

In CVC, whereas control verbs that select complementizer *pa* allow for an overt embedded subject (see section 2.5.1.4. above), sentences (172) and (173) cannot exhibit an overt embedded subject, which is evidence for a defective temporal domain, as (174) illustrates. The reference of the lower subject is fixed by a matrix DP (cf. (175)).

- (174) N [v kre] [CP Ø *N/bu da Maria un romansi].
 1SG want(IPFV) 1SG/2SG give Maria a novel
 Lit.: ‘*I want I/you give Maria a novel.’
 ‘I want to give Maria a novel.’

- (175) [Nu]_i kre [CP Ø [--]_{i/*j} fase un grupu kultural].
 1PL want(IPFV) do a group cultural
 ‘We want to form a cultural group.’

⁸⁸ According to the Government and Binding Theory (cf. Chomsky, 1981), these verbs may assign accusative Case to the subject of their sentential complement without resorting to a visible complementizer.

⁸⁹ It seems that Haitian Creole behaves just like CVC, as DeGraff (2007: 109) notes, Haitian Creole “does not have a general-purpose, semantically-empty pre-verbal infinitive marker like English to (...).”, and therefore “allows a null complementizer to introduce certain classes of clausal complements”.

The discussion on null complementizers goes back to Kayne (1980, ap. Chomsky, 1981), who treated those constructions in terms of government and Case-assignment of the embedded subject position occupied by PRO (specifically, an ECP analysis⁹⁰). More recently, Bošković & Lasnik (2003) have argued for an account of the distribution of null C in English that does not use the notion of government. In fact, the authors assume that the null C is a PF affix (following Pesetsky, 1992).

Root wh-questions that involve wh-pronouns like *modi* ‘how’ *pamodi* ‘why’ and *undi* ‘where’ and wh-in-situ constructions of CVC support further an analysis of null complementizer. More specifically, recall from sections 2.3.2.4. and 2.3.2.5. above that in these sentences *ki* (the obligatory complementizer of all other wh-questions) may not occur, i.e. C° may be phonetically empty, as in (176).

- (176) a. **Modi (ki)** Djon fase kel funku-li?
 how Djon do(PFV) DEM hut-PROX
 ‘How did Djon build this hut?’
- b. **Pamodi (ki)** Maria ka ben?
 why Maria NEG come(PFV)
 ‘Why didn’t Maria come?’
- c. **Undi (ki)** bu ta bai?
 where 2SG IPFV go
 ‘Where do you go?’

I suggest that the co-occurrence of these wh-pronouns with a possible null complementizer is related to the possibility of PP pied-piping (cf. (177)) and to the rejection of the Preposition Stranding with a Spelled-out Trace (PSST) strategy, as in (178) (see chapter 5., for the licensing of the PSST strategy).

⁹⁰ Chomsky (1981: 250) states the Empty Category Principle as in (i):

ECP

(i) “ECP: [_α e] must be properly governed”.

(177) [PP **Na undi**]_i bu ta mora [--]_i?

in where 2SG IPFV live

‘Where do you live?’

(178) *[**Undi**]_i Maria ta trabadja n’[**el**]_i?

where Maria IPFV work in.3SG

‘*Where does Maria work in it?’

I conclude that CVC marks positively the C parameter (cf. Duarte, 2000, and see further discussion on this topic in the next chapter), which means that C° is ambiguous and it must be disambiguated through wh-movement to SpecCP of a wh-operator. I also propose that the null complementizer must be underspecified for the [\pm D] feature and that is the reason why a PP must be attracted / pied-piped to SpecCP of the null complementizer.

2.5.2. The non-Split-CP hypothesis

The data on the complementizer system of CVC show that there is no need for a Split-CP analysis, in the line of Rizzi (1997a)⁹¹, and the behavior of complementizers can instead be straightforwardly explained within the classic CP account. Following Newmeyer (2003), who presents several arguments against projecting functional categories associated to distinct interpretations that trigger A'-movement, I will assume a minimalist approach to the left periphery. More specifically, I will propose that the

⁹¹ Based on word order evidence, Rizzi (1997a) suggests that the C system should be split as follows:

(i) Force (Top) Foc (Top) Fin IP.

According to Rizzi's proposal, the left periphery of the clause involves Force and Fin(iteness), which are the elements of a fixed component, and Top(ic) and Foc(us), only activated when needed.

Force encodes clause type information (e.g. declarative, interrogative, exclamative, relative, etc.) and Fin accommodates information on the finite vs. non-finite status of the clause.

Since I am not going to discuss topicalized and focused constituents but wh-constructions, I am really departing away from Pollock's (2008) proposal, in (ii), and especially Obenauer (2008), who suggests that the left periphery can be expanded into several wh- functional projections, in order to include different types of 'special interrogatives' that have been identified for the Northern Italian dialect Bellunese, such as (a) surprise-disapproval questions (SDQs); (b) rhetorical questions (RQs); and (c) can't-find-the-value questions (CfvQs). The structure that Obenauer suggests, in (iii), is much more detailed in the left periphery than Rizzi's proposal.

(ii) [_{WhP1} Wh°1 [_{ForceP} F° [_{GroundP} G° [_{WhP2} Wh°2 [_{IP} ...]]]]]

(iii) [_{RQP} ... [_{SDQ} ... [_{CfvP} ... [_{WhP1} ... [_{WhP2} ... [_{IP} ...]]]]]]]

complementizers *di*, *ki*, *ma*, *pa*, *pamodi*, *si* and \emptyset can all be placed in C° because their (complementary) distribution depends on their formal properties.

For the time being, I suggest that C° has five binary formal features that have to be identified either by a complementizer merged in that position or through a Spec-head relation with a moved element in SpecCP.

The following formal features can be expressed by a CVC complementizer in C° :

- (183) a. [+D] – indicates that the embedded clause is selected by a Noun or an Adjective;
b. [+V] – indicates that the embedded clause is selected by a Verb;
c. [+Q] – indicates that the clause is a question;
d. [+Wh] – indicates that the sentence it introduces is a Wh-question, a cleft or a relative clause;
e. [+T] – indicates that the embedded domain is finite.

Table 6. sums up the present proposal for CVC data, revealing the unique nature and the complementary character of its complementizers.

Table 6. Distribution and formal features of the complementizers in CVC

Complementizers	Formal Features of C°					Types of sentences
	[D]	[V]	[Q]	[Wh]	[T]	
di	±	-	-	-	±	Complement clauses of N and Adj
	-	±	-	-	-	Complement clauses of epistemic Vs
ki	+	±	-	-	+	Complement clauses of N and Adj
	+	-	+	+	+	Wh-questions
	+	-	-	+	+	Relative clauses and clefts
ma	-	+	-	-	+	Complement clauses of Vs
pa	-	±	-	-	±	Complement clauses of Vs
	±	-	-	+	-	Infinitival relative clauses
pamodi	+	-	-	-	+	Complement clauses of Adj
si	-	+	+	+	+	Indirect Wh-questions
Ø	-	+	-	-	-	Complement clauses of control Vs
	±	-	+	+	+	Wh-questions (with fronted wh-pronouns such as <i>modi</i> , <i>pamodi</i> , <i>undi</i> and with wh-in situ)

2.6. Summary

In this chapter we have discussed some aspects of CVC grammar that interact with the formation of wh-questions and relative clauses. Particularly, in section 2.2., I suggested that CVC exhibits no verb movement to T. Although the copula verb in the Present tense form *e* occurs in T°, it is merged in that position as an expression of the formal feature [Present] and the sentence does not project a VP, while all the other verbs (including the past tense form of the copula verb – *era*) stay within the VP.

In section 2.3. I have assumed that the tripartite pronominal system of Cardinaletti & Starke (1994) is observed in CVC. It was shown that only nonclitic forms can be the complement of prepositions, receiving a Case non-distinct from the one that is assigned to Nominative nonclitic pronouns, thus being distinct from direct object (clitic) pronouns, while verbs select for clitic pronouns. In this section, I also analyzed the several wh-constituents that CVC exhibits, claiming that *ken* and *kenha* (the nominal expressions specified for the semantic feature [+Human]) are

synchronically allomorphs of the same wh-word and that *ken/kenha* and *kusé* (specified for [-Human]) co-occur obligatorily with an overt complementizer *ki*. I have also shown that the wh-word *ki* (in *ki N*) does not behave as a clitic because it cannot be separated by epithets or occur in isolation.

The structure of the DP in CVC was briefly analyzed in section 2.4., focusing on the expression of [Number] in D° and describing the behavior of determiners and quantifiers. In particular, I have assumed a non-split DP structure in CVC, in which the functional categories of [Number] and [Gender] do not project. I have also taken [Number] to be a formal feature of D° and [Gender] to be lexically marked. I have also claimed that there is a change still operating from demonstrative (*kel(s)* ... *li/la*) to definite article (*kel(s)*). CVC being a head-initial language, the complements and modifiers of the noun occur to its right.

The description of the complementizer system of CVC, in section 2.5., led me to propose a feature-based analysis of the elements that occur in C°, against Rizzi's Split-CP hypothesis. A more unified approach was achieved, since all complementizers are merged (internal move) in C° and do not have to move within the left periphery, since their (complementary) distribution depends on their formal properties. I claimed that C° has five formal features that have to be identified either by a complementizer merged in that position or through a Spec-head relation with a dislocated element in SpecCP.

3. Wh-Questions in Cape Verdean Creole

3.1. Introduction

The research on wh-questions has been deeply developed in Generative Grammar studies since the late sixties¹, focusing on the nature of the mechanisms involved in the formation of these syntactic structures and stressing on the intra and cross-variation of this topic.

Meanwhile, the effort to describe and analyze wh-questions within Creole studies focused on the relation between the wh-question patterns of Creole languages and those of their substrate and superstrate. The thing that must be highlighted, however, is that “diversity seems to be the rule, i.e. we find the same variation among creoles as we do among other languages” (cf. Veenstra & Den Besten, 1995: 304).

This is the reason why the goals of the present chapter are to describe CVC wh-question formation patterns, to present the wh-fronting strategies of this language and to evaluate the theoretical impact of choosing one strategy. At this stage, it is interesting to know whether the interrogative clauses of CVC involve wh-movement, i.e. to see if at a given syntactic position there is Merge of a wh-element moved by Attract to SpecCP in order to establish an Agree relation with C°, for checking purposes. If research shows that wh-questions in CVC involve Move, the next question to address is whether it operates in the same way with all the questioned constituents. If, on the other hand, research shows that (overt) Move is not obligatory in CVC wh-interrogatives, one must explore the formal properties of such interrogatives and its obligatorily vs. optional occurrence. Some related questions, as the ones listed in (1), arise from the observation of such wh-constructions in CVC.

¹ I refer the reader to some well known papers on this topic, such as Ross (1967), Chomsky (1977), Huang (1982), Cheng (1991), Cinque (1991). The wh-questions of CVC have not received much attention, though. See some brief notes on these constructions in Veiga (1982, 1995 and 2000), Suzuki (1994), Quint (1998 and 2002), Baptista (1999 and 2002), Brüser & Santos (2002). Finally, with respect to some languages related to CVC, namely, Portuguese (in its European and Brazilian varieties) and Wolof, see Ambar (1992) and Duarte (2000), for EP, Lopes-Rossi (1993), Kato et al. (1996) and Kato (2004), for BP, and Torrence (2005), for Wolof.

- (1) a. Are there S(ubject)-O(bject) asymmetries?
- b. Are there argument-adjunct asymmetries?
- c. Is there a process of clausal typing?

In section 3.2. we explore interrogative clauses of CVC that involve overt wh-movement, i.e. the output of gap, Preposition Stranding with a Spelled out Trace and P-chopping strategies; section 3.3. focus on some strategies of wh-questions that typically do not involve (overt) wh-movement (resumption and wh-in-situ); and in section 3.4 I present an analysis of CVC fronted and in situ wh-questions. We will see, then, that a language like CVC exhibits the wh-questions strategies presented in table 1., according to the categorial nature of the interrogative constituents.

Table 1. Syntactic operations, wh-questions strategies and the categorial nature of the wh-elements

Syntactic operations	Wh-question strategies	Categorial nature	
		DP	PP
With fronted wh-elements	Gap	✓	✓
	PSST	*	✓
	P-chopping	*	✓
Without fronted wh-elements	Resumptive	*	✓
	In situ	✓	✓

3.2. Wh-Questions with overt wh-movement

It is commonly assumed, since Ross (1967) and especially Chomsky (1977), that questioned constituents are subject to wh-movement to a position in which they can have scope over all the other constituents of the sentence (a process often called ‘fronting’). In this process, the moved element functions as an Operator and forms a nontrivial chain with its foot, i.e. the original extraction site. The foot of a (nontrivial) A’-chain has the status of a syntactic (null) variable, since it is A’-bound by the Operator in SpecCP. In this type of chain, an additional mechanism of ‘pied-piping’²

² See chap. 5, section 5.2.2.2. for the formal definition of Ross’ (1967) convention on pied-piping.

can also intervene, dragging to SpecCP the phonetic material associated to a wh-word, usually, a preposition.

3.2.1. The gap strategy

In the formation of wh-questions, CVC exhibits a (null) gap strategy. This strategy consists of moving a wh-word to SpecCP and leaving a phonetically empty (null) copy in the original extraction site. The process operates over DPs with the grammatical function of Subject, Direct Object, Primary and Secondary Object (OBJ₁ and OBJ₂), and Oblique modifiers (OBL_{Nucl} and OBL_{Access}).

Considering the wh-questioning of matrix or embedded Subjects, the gap strategy applies using the wh-elements *ken/kenha* ‘who’ or *ki N* ‘which N’, as in (2), and *kusé*³ ‘what’ or *kantu N* ‘how.much/many N’, as in (3).

- (2) a. [DP/SBJ **Ken/kenha**]_i ki [~~ken/kenha~~]_i papia ku nha pai?
 who that talk(PFV) with POSS.1SG father
 ‘Who talked with my father?’
- b. N ka sabe [DP/SBJ **ken/kenha**]_i ki [~~ken/kenha~~]_i skrebe
 1SG NEG know(IPFV) who that write(PFV)
 kel nobidadi-li.
 DEM news-PROX
 ‘I don’t know who wrote this news.’
- c. N purgunta-u [DP/SBJ **ki mudjeris**] ki [~~ki mudjeris~~] fase
 1SG ask(PFV)-2SG which women that do(PFV)
 kel katxupa sabi li.
 DEM katxupa good PROX
 ‘I asked you which women did this nice katxupa.’

³ The wh-word *kusé* ‘what’ occurs in SBJ wh-questions only in very specific contexts, since it bears the semantic feature [-human]. For instance, see sentence (3a.) in the text, in which the unaccusative verb selects for an internal argument [\pm animate].

- (3) a. [DP/SBJ **Kusé**]_i ki txiga [~~kusé~~]_i?
 what that arrive(PFV)
 ‘What did arrive?’
- b. Bu sabe [DP/SBJ **kusé**]_i ki [~~kusé~~]_i kebra bidru?
 2SG know(IPFV) what that break(PFV) glass
 ‘Do you know what broke the glass?’
- c. [DP/SBJ **Kantu algen**]_i ki [~~kantu-algen~~]_i sa ta pripara manifestason?
 how.many someone that PROGR prepare manifestation
 ‘How many people is preparing the manifestation?’

When applying to DO, the gap strategy uses the wh-constituents *ken/kenha*, *kusé*, *ki/kantu N* and *kantu*, as in (4)-(8).

- (4) [DP/DO **Ken/Kenha**]_i ki Maria odja [~~ken/kenha~~]_i?
 who that Maria see(PFV)
 ‘Who did Maria see?’
- (5) Maria djobe [DP/DO **kusé**]_i ki mininus riska [~~kusé~~]_i?
 Maria see(PFV) what that boys draw(PFV)
 ‘Maria saw what the boys drew?’
- (6) [DP/OD **Ki librus**]_i ki Djon kunpra [~~ki-librus~~]_i?
 which books that Djon buy(PFV)
 ‘Which books did Djon buy?’
- (7) [DP/DO **Kantu**]_i ki bu tene [~~kantu~~]_i?
 how.much that 2SG have(IPFV)
 ‘How much do you have?’
- (8) [DP/OD **Kantu fidjus**]_i ki bu ten [~~kantu-fidjus~~]_i?
 how.many sons that 2SG have(IPFV)
 ‘How many sons do you have?’

The stragey also applies to DOCs of CVC. As in this language the Primary object (OBJ₁) is semantically a Benefactive, exhibiting the semantic feature [+human], it is represented by the wh-word *ken/kenha* ‘who’, while the Secondary object (OBJ₂) is [±animate] and, therefore, can be expressed by *kusé* or *kantu*, as in (9)-(10). Wh-phrases of the form *ki N* are also available in these constructions, as in (11).

- (9) [DP/OBJ₁ **Ken/kenha**]_i ki Djon da [~~ken/kenha~~]_i si kasa?
 who that Djon give(PFV) POSS.3SG house
 Lit.: ‘Who did Djon give his house?’
 ‘Who did Djon give his house to?’

- (10) [DP/OBJ₂ **Kusé/kantu**]_i ki Djon da Maria [~~kusé/kantu~~]_i?
 what/how.much that Djon give(PFV) Maria
 ‘How much/What did Djon give Maria?’

- (11) [DP/OBJ₁ **Ki mininus**]_i ki pursor da [~~ki mininus~~]_i kes libru-li?
 which boys that teacher give(PFV) DEM book-PROX
 Lit.: ‘Which boys did the teacher give these books?’
 ‘Which boys did the teacher give these books to?’

Finally, Oblique modifiers (OBL_{Access}), whether or not Locative (LOC), assume the form of the wh-words *modi* ‘how’, *pamodi* ‘why’ and *undi* (or *nundi*, *pundi*) ‘where’⁴, as in (12)-(14).

- (12) [DP/OBL_{Access} **Modi**]_i ki Djon fase kel funku-li [~~modi~~]_i?
 how that Djon do(PFV) DEM hut-PROX
 ‘How did Djon do this hut?’

⁴ See chap. 2, section 2.3.2.5., on further details on this wh-word. Note, however, that the contracted forms *nundi* / *pundi* are also found in Guinea-Bissau Kriyol. According to Kihm (1994), the wh-word *nunde* (*na* + *unde* ‘in + where’) is even more frequent than the ‘simple’ form *unde*, as in (i).

(i) N na leba u **nunde** ku sancu ciw nel. Kriyol
 1SG IPFV take 2SG where that monkey very in-3SG
 Lit.: ‘I take you to where there are many monkeys in it.’
 ‘I take you where there are many monkeys.’
 (adapted from Kihm, 1994: 209)

- (13) [DP/OBL_{Access} **Pamodi**]_i ki Maria ka ben [~~pamodi~~]_i?
 why that Maria NEG come(PFV)
 ‘Why didn’t Maria come?’

- (14) a. [DP/OBL_{Loc} **Undi**]_i ki Maria ta trabadja [~~nundi~~]_i?
 where that Maria IPFV work
 ‘Where does Maria work?’

- b. [DP/OBL_{Loc} **Nundi**]_i ki Maria sa ta bai [~~nundi~~]_i?
 where that Maria PROGR go
 ‘Where is Maria going?’

3.2.2. The gap strategy with PP pied-piping

The gap strategy allows for PP pied-piping in wh-questions formation in CVC. The process moves by pied-piping a preposition and the wh-phrase that it selects for up to SpecCP, leaving a null copy at the extraction site.

This strategy applies to matrix or embedded PPs which are verb complements. These questioned elements take the form of ‘P + wh-word/phrase’. Particularly, when the questioned constituent is the non-Locative complement of a verb (OBL_{Nucl}), it is expressed by *P ken/kenha/kusé* ‘P who/what’, or by *P ki N* ‘P which N’, as in (15)-(17).

- (15) Bu ka sabe [PP/OBL_{Nucl} **ku kenha**] ki bu sa ta
 2SG NEG know(IPFV) with who that 2SG PROGR
 papia [~~ku kenha~~]
 talk
 ‘Don’t you know with whom are you talking?’

- (16) a. [PP/OBL_{Nucl} **Di kenha**] ki bu ka kre pa nu
 of who that 2SG NEG want(IPFV) for 1PL
 gosta [~~di kenha~~]
 like
 Lit.: ‘Of whom you don’t want us to like?’
 ‘Who don’t you want us to like?’

b. [PP/OBL_{Nucl} **Di kusé**] ki bu ka gosta [~~di kusé~~]?
 of what that 2SG NEG like(IPFV)

Lit.: ‘Of what don’t you like?’

‘What don’t you like?’

(17) [PP/OBL_{Nucl} **Ku ki mininas**] ki bu papia [~~ku ki mininas~~] na festa?
 with which girls that 2SG talk(PFV) in party

‘With which girls did you talk at the party?’

Complement or adjunct Locative constituents (OBL_{Loc}) may also involve PP pied-piping with a null gap with D(iscourse)-Linked wh-elements (*P ki N* ‘P which N’⁵), as in (18)-(19).

(18) [PP/OBL_{Loc} **Na ki merkadu**] ki Maria bai [~~na ki merkadu~~]?
 in which market that Maria go(PFV)

‘In which market did Maria go?’

(19) [PP/OBL_{Loc} **Na ki sinema**] ki Djon staba [~~na ki sinema~~]?
 in which cinema that Djon be(IPFV).ba

‘In which cinema was Djon?’

3.2.3. The preposition stranding with a spelled out trace (PSST) strategy

As an alternative strategy to (null) gap with PP pied-piping, CVC exhibits Preposition Stranding with a Spelled out Trace (or copy, in current terms, and hereafter PSST), following Veenstra & Den Besten (1995) proposal for a PP wh-fronting strategy of several Creole languages. This process applies exclusively to PPs, irrespective of their grammatical function (OBL_{Nucl}, OBL_{Access}, OBL_{Loc}), and it is a subtype of the stranding strategy with the particular property of filling the DP extraction site with a pronominal invariable (3SG) form *el* (which is an imperfect copy of the head of the chain).

⁵ I recall that the wh-word *undi* ‘where’, when preceded by the prepositions *di/na/pa* ‘of/in/to’ does not count as a sequence *P + wh* but as a single unit, reanalyzed as a DP (cf. chap. 2).

Note further that the PSST strategy of CVC can involve all sorts of wh-elements, such as the wh-words *ken/kenha/kusé* ... *P-el* ‘who/what ... P-3SG’, and the wh-phrases *ki N* ... *P-el* ‘which N ... P-3SG’, as in (20)-(22).

- (20) [DP **Ken/kenha**]_i ki bu sa ta papia [PP/OBLNuc1 ku-**[el]**]_i?
 who that 2SG PROGR talk with-3SG
 Lit.: ‘Who are you talking with him?’
 ‘Who are you talking with?’

- (21) [DP **Kusé**]_i ki bu kebra karu [PP/OBLAccess ku-**[el]**]_i?
 what that 2SG break(PFV) car with-3SG
 Lit.: ‘What did you break the car with it?’
 ‘What did you break the car with?’

- (22) [DP **Ki subrinhus**]_i ki bu gosta [PP/OBLNuc1 d-**[el]**]_i más txeu?
 which nephews that 2SG like(IPFV) of-3SG more very
 Lit.: ‘Which nephews do you like him more?’
 ‘Which nephews do you like the most?’

Furthermore, the PSST strategy only affects D-linked Locative PPs, as in (23); otherwise, the language applies the strategy of gap (without pied-piping), as the ungrammaticality of (24) shows.

- (23) [DP **Ki skolas**]_i ki Maria ta trabadja [PP/OBLLoc na-**[el]**]_i?
 which schools that Maria IPFV work in-3SG
 Lit.: ‘Which schools does Maria work in it?’
 ‘Which schools does Maria work in?’

- (24) *[DP **Undi**]_i ki Maria bai [PP/OBLLoc na-**[el]**]_i?
 where that Maria go(PFV) in-3SG
 Lit.: ‘Where did Maria go in it?’

There is no doubt that the PSST strategy of CVC wh-questions only applies to PPs, since it yields ungrammatical outputs when it ranges over SBJ or DO constituents, as in (25) and (26).

- (25) *N purgunta-u [DP/SBJ **ki mudjeris**]_i ki [e]_i fase
 1SG ask(PFV)-2SG which women that 3SG do(PFV)
 kel katxupa sabi li.
 DEM katxupa good PROX
 Lit.: 'I asked you which women she did this nice katxupa.'

- (26) *Bu ka sabe [DP/DO **ki librus**]_i ki Djon kunpra-[I]_i.
 2SG NEG know(IPFV) which books that Djon buy(PFV)-3SG
 Lit.: 'You don't know which books Djon bought it.'

As a final note on this strategy (without deeper considerations, given the fact that it will be discussed in length in chap. 5), I assume that it involves wh-movement since it cannot extract PPs out of syntactic islands, as the ungrammaticality of sentences (27) and (28) shows.

Nominative Island

- (27) *[_{DP} **Ki librus**]_i ki papia d-[e]_i e difisi?
 which books that talk of-3SG be difficult
 Lit.: 'Which books is that to talk about it is difficult?'

Complex NP Island

- (28) *[_{DP} **Ki mudjeris**]_i ki dja bu atxa un omi
 which women that already 2SG find(PFV) a man
 ki papia ku-[e]_i?
 that talk(PFV) with-3SG
 Lit.: 'Which women did you find a man that talked with him?'

3.2.4. The P-chopping strategy

CVC displays also a P-chopping strategy⁶ as an alternative to the gap with PP pied-piping and the PSST strategies. This particular process involves the deletion (at PF) of the preposition that selects for the element that is going to be questioned and fronted to SpecCP⁷.

As a direct alternative to PSST, the P-chopping strategy applies to all kinds of PPs as long as the preposition involved is ‘light’⁸, as *di* ‘of’ and *na* ‘in’ in sentences (29) and (30).

- (29) [DP Ki subrinhus]_i ki bu gosta [PP/OBLNuc] ~~di~~ [Ki subrinhus]_i] más?
 which nephews that 2SG like(IPFV) more
 Lit.: ‘Which nephews do you like the most?’

- (30) N purgunta [DP ki skolas] ki Maria ta
 1SG ask(PFV) which schools that Maria IPFV
 trabadja [PP/OBLAccess ~~na~~ [ki skolas]_i].
 work
 Lit.: ‘I asked which schools Maria works.’

Contrary to prepositions *di* and *na*, which can also be pied-piped (cf. (15)-(19) above), ‘heavy’⁹ prepositions block pied-piping, as in (31)-(32), and display a PSST or an English-like P-stranding strategy (without a spelled out trace/copy), as in (33)-(34).

⁶ Chopping transformations are for the first time referred to by Ross (1967), who defines them as in (i).

Chopping transformations

(i) “If a transformation reorders a_i , and its structural change substitutes the identity element or some a_k , $i \neq k$, for the i^{th} term of the structural index, the transformation is a chopping transformation. Other reordering transformations are called copying transformations.”
 (id., p. 235)

⁷ In the examples, the deleted prepositions are signaled by a double strikethrough.

⁸ Suzuki (1994: 47) refers that the most frequent prepositions of CVC are *di* ‘of’, *ku* ‘with’, *na* ‘in’ and *pa* ‘for’ and that they “may be omitted in a sentence where its meaning can be clearly inferred from the context” (id., p. 50).

⁹ A ‘heavy’ preposition, contrary to the ‘light’ one, is an element with longer phonetic content. As they can occur alone, Brito (2003: 392) suggests that their arguments can be null.

- (31) *_[PP/OBLNuc] **Riba ki mesa** ki Djon po si
 over which table that Djon put(PFV) POSS.3SG
 txapeu [~~riba ki mesa~~]?
 hat
 ‘On the top of which table did Djon put his hat?’
- (32) *_[PP/OBLAccess] **Kontra ki prupostas di Gubernu** ki kel
 against which proposals of Government that DEM
 diputado-la vota [~~kontra ki prupostas di Gubernu~~]?
 deputy-DIST vote(PFV)
 ‘Against which proposals of the Government did that deputy vote?’
- (33) [_{DP} Ki mesa]_i ki Djon po si txapeu [_{PP/OBLNuc} **riba [el]**]_i?
 which table that Djon put(PFV) POSS.3SG hat over 3SG
 Lit.: ‘Which table did Djon put his hat over it?’
- (34) [_{DP} Ki prupostas di Gubernu] ki kel diputado-la
 which proposals of Government that DEM deputy-DIST
 vota [_{PP/OBLAccess} **kontra** [~~ki prupostas di Gubernu~~]]?
 vote(PFV) against
 ‘Which proposals of the Government did that deputy vote against?’

The particular behavior displayed by ‘heavy’ prepositions as *riba* (*di*) ‘over of’ or *kontra* ‘against’ must be accounted for by assuming that these prepositions are able to license a null pronoun, as Rizzi (1986: 519, fn. 15) suggested for French¹⁰. In fact, at first sight, CVC seems to behave like English in allowing P-stranding in wh-questions, as (34) above¹¹. But the language also exhibits P-stranding in other syntactic contexts, just like French and EP, and contrary to English, as in (35)-(38).

¹⁰ If these constructions were to receive a wh-movement analysis, involving a variable at their complement position, they would be a counter-argument for the PSST strategy in CVC (see, particularly, chap. 5, section 5.2.5.2.).

¹¹ Note that French, or even EP, do not allow for P-stranding with ‘heavy’ prepositions in wh-questions, as in (i) and (ii).

(i) *Quelle valise est-ce que Marie a voyagé **avec**? French
 which bag is.that Marie have travel(PFV) with
 ‘Which bag did Marie travel with?’
 (adapted from Zribi-Hertz, 1996: 238)

- (35) Q: Maria vota na prupostas di Gubernu?
 Maria vote(PFV) in proposals of Government
 ‘Maria voted for the Government’s proposals?’
 A: Nau, Maria vota **kontra**.
 ‘No, Maria voted against.’

- (36) Q: Tu vois cette valise? French
 2SG see(IPFV) DEM bag
 ‘Do you see this bag?’
 A : Marie voyage toujours **avec**.
 Marie travel(IPFV) always with
 ‘*Marie always travels with.’
 (adapted from Zribi-Hertz, 1996: 237)

- (37) Q: E a liberalização do aborto? EP
 and the liberalization of.the abortion
 Lit.: ‘And the liberalization of abortion?’
 A: Eu sempre votei **contra**.
 1SG always vote(IPFV) against
 ‘*I have always voted against.’

- (38) Q: Will Mary vote for these Government proposals? English
 A: *No, she will vote **against**.

According to Zribi-Hertz (1996: 237), sentences like (36) receive the same interpretation as sentences in which the complement of the preposition *avec* is overt (e.g. Cette valise, Marie voyage toujours avec **elle**.). For CVC, sentence (35) shows that the complement of the preposition *kontra* (in the answer) is a null pronoun (*pro*) with a discourse antecedent. Rizzi (1986: 520) claims further that the ‘content’ of *pro* “must be fully recoverable from the overt linguistic context through some kind of binding relation”.

-
- (ii) *Que propostas é que o João votou **contra**? EP
 which proposals be that the João vote(PFV) against
 ‘Which proposals did João vote against?’

Returning back to the P-chopping strategy, it can be argued that the process involves wh-movement, since it is excluded from syntactic islands, as in (39)-(41).

Nominative Island

- (39) *[_{CP} [_{DP} Ki librus] ki papia [_{PP} ~~di~~ [_{NP} ~~ki librus~~]]] e difisi?
 which books that talk be difficult
 ‘*Which books is that to talk is difficult?’

Complex NP Island

- (40) *[_{DP} Ki mudjeris] ki dja bu atxa [_{DP} un omi
 which women that already 2SG find a man
 [_{CP} ki papia [_{PP} ~~ku~~ [_{NP} ~~ki mudjeris~~]]]]?
 that talk(PFV)
 ‘*Which women did you find a man that talked?’

Adjunct Island

- (41) *[_{DP} Ki amigus] ki bu bai Fransa ku Maria
 which friends that 2SG go(PFV) France with Maria
 [_{CP} sen papia [_{PP} ~~ku~~ [_{NP} ~~ki amigus~~]]]]?
 without talk
 Lit.: ‘Which friends did you go to France with Maria without talking?’

The behavior of wh-phrases that express ‘quantity of time’, as *ki N_[Qt Time]*¹² is worth noticing. These wh-phrases seem to require the P-chopping strategy; in fact, they disallow PP pied-piping, as in (42b.), although a verb like *fase* ‘to do’ selects for the preposition *pa* ‘for’, as in (43).

- (42) a. [_{DP} Ki dia]_i ki bu ta fase anu [_{PP/OBL} ~~na~~ [_{NP} ~~ki dia~~]_i]?
 which day that 2SG IPFV do year
 ‘Which day is your birthday?’

¹² Specifically, see chap. 2, section 2.3.2.6.

b. *_{[PP/OBL Na ki dia]_i ki bu ta fase anu [~~na ki dia~~]_i?}
 in which day that 2SG IPFV do year
 ‘In which day is your birthday?’

- (43) Txeu algen ta pensa ma mi
 very someone IPFV think that 1SG
 N ta fase anu _[PP na dia di Sántu André].
 1SG IPFV do year in day of Saint André
 ‘Lots of people think that my birthday is in Saint Andre’s day.’
 (Brüser & Santos, 2002: 26)

We can eventually assume that the preposition in (42a.) – *na* ‘in’ – was not really chopped, but incorporated into the wh-phrase *ki N_[Qt Time]* and crystallized. In other words, the categorial status of *ki N_[Qt Time]* is a DP and not a PP with a chopped P. Note that certain expressions of time in EP and English are real PPs, despite their DP form in declarative sentences, as in (44a.) and (45a.), that is, their behavior is the opposite of the same type of expressions in CVC.

- (44) a. Almocei com a Maria _[DP a semana passada]. EP
 lunch(PFV).1SG with the Maria the week last
 ‘I lunched with Maria last week.’

b. *_{[DP Que semana] almoçaste com a Maria?}

- (45) a. John found Mary _[DP Wednesday]. English
 b. ?*_{[DP Which day] did John find Mary?}

Brito (2003: 393) suggests that the diagnosis for the prepositional nature of a constituent is the possibility to dislocate it or emphasize it through certain syntactic processes. As EP and English show, *a semana* ‘the week’ and *Wednesday*, in (44)-(45), obligatorily occur with an overt preposition when questioned, as in (46) and (47).

- (46) [PP Em que semana] almoçaste com a Maria? EP
 in which week lunch(PFV).2SG with the Maria
 ‘In which week did you lunch with Maria?’

- (47) [PP In which day] did John find Mary? English

There are, however, languages in which time expressions of this sort seem to be true DPs, as in French and Spanish (cf. (48)-(49)).

- (48) Quel mois viens-tu? French
 which month come-2SG
 Lit.: ‘Which month do you come?’
 ‘In which month do you come?’

- (49) ¿Qué semana te toca poner disco? Spanish
 which week 2SG turn put disk
 Lit.: ‘Which week is your turn to play music?’
 ‘In which week is your turn to play music?’

In this line of reasoning, wh-phrases *ki N_[Qt Time]* of CVC only appear to be DPs because the preposition is chopped, which explains straightforwardly the impossibility of PSST with these constituents, as (50) illustrates.

- (50) *_{[DP **Ki ora**]_i} ki Nhu Prizidenti ta txiga n’_{[el]_i}?
 which hour that Mr. President IPFV arrive in-3SG
 Lit.: ‘Which hour does Mr. President arrive in it?’
 ‘When/At what time does Mr. President arrive?’

3.3. Wh-Questions without wh-movement

Nowadays, to consider that wh-questions can be formed by a non wh-movement strategy is not a standard assumption, because they have been treated as (overt or covert) movement constructions (vd. section 3.2. above). As Rizzi (2006: 98) puts it,

“Movement is pervasive in natural languages: it is quite typical that most or all of the pronounced elements in a given structure will have moved from the positions in which they were first merged”. Furthermore, some scholars claim now a ‘generalized’ movement approach to all wh-clauses, even in cases that were always the classical examples of absence of wh-movement, as resumption¹³.

Nevertheless, I will show that there are still arguments that support the (classic) non wh-movement analysis of some wh-questions, as insensitivity to syntactic islands (see, particularly, chap. 5 for other properties of resumptive wh-questions and restrictive relative clauses).

3.3.1. The resumptive strategy

The formation of wh-questions is usually subject to great variation, intra and cross-linguistically. Usually, languages do not allow for a wh-element to be extracted out of a strong syntactic island. There are, however, languages that exhibit a way of escaping islands effects, requiring a resumptive pronoun to occur in the original site of the wh-constituent, as Papiamentu¹⁴ and Haitian¹⁵, in (51) and (52), just to name a few.

- (51) [Kwa homber-nan]_i Wancho a konta bo e kwenta Papiamentu
 which man-PL Wancho PR tell you the story
 ku ela laga [**nan**]_i drenta?
 that he-PAST let RP enter
 ‘Which men has Wancho told you the story that he has let them enter?’
 (Veenstra & Den Besten, 1995: 313)

¹³ See, for instance, Boeckx (2003a), who proposes an approach of resumption as stranding, i.e. the constructions involving resumptive pronouns are derived by movement of their complement being left stranded in the head position of a big DP. See chap. 5, section 5.2.5.1. for further details on Boeckx (2003a) analysis.

¹⁴ Some scholars classify this language as a Portuguese-based Creole relexified by Spanish. More specifically, Papiamentu is a Caribbean Creole language spoken in ABC (Aruba, Bonaire and Curaçao) islands, with a vocabulary largely imported from Spanish, Portuguese, English, French and Dutch (see Muysken, 1980, Maurer, 1988 and 1998, a.o.).

¹⁵ Haitian Creole is one of the two official languages spoken in Haiti, along with French, and is classified as a French-based Creole.

- (52) [Ki etidyan]_i sa yo Jan mande Mari si [yo]_i/*li Haitian
 which student that PL John ask Mary if RP
 achete liv la?
 buy book DET
 ‘Which students (among these) did John ask Mary whether they bought the
 book?’
 (Law, 1993, ap. Veenstra & Den Besten, 1995: 312)

CVC behaves like Papiamentu and Haitian, with respect to strong islands wh-extraction, applying a resumptive strategy in these contexts. Particularly, I will assume that resumptive wh-questions of CVC involve a wh-element merged in SpecCP, which forms an A'-Binding chain with a third person pronoun that agrees with the ϕ -features of the wh-constituent. In CVC, the resumptive strategy occurs as a Last Resort mechanism, rendering good derivations within syntactic islands contexts and yielding syntactic objects like [ki N_[+PL] ... P-es], as in (53)-(55).

Nominative Island

- (53) [CP [DP **Ki librus**]_i ki papia [PP d-[es]_i] e difisi?
 which books that talk of-3PL be difficult
 Lit.: ‘Which books is that to talk about them is difficult?’

Complex NP Island

- (54) [DP **Ki mudjeris**]_i ki dja bu atxa [DP un omi
 which women that already 2SG find a man
 [CP ki papia [PP ku-[es]_i]]?
 that talk(PFV) with-3PL
 Lit.: ‘Which women did you find a man that talked with them?’

Adjunct Island

- (55) [DP **Ki amigus**]_i ki bu bai Fransa ku Maria
 which friends that 2SG go(PFV) France with Maria
 [CP sen papia [PP ku-[**es**]_i]]?
 without talk with-3PL
 Lit.: ‘Which friends did you went to France with Maria without talking with them?’

This strategy only applies to PPs, as the ungrammaticality of questioned SBJ, DO, OBJ₁ and OBJ₂ in (56)-(58) shows.

- (56) *Dja bu odja [ki mininus]_i ki [DP/SBJ **es**]_i kebra bidru?
 already 2SG see(PFV) which boys that 3PL break glass
 Lit.: ‘*Have you seen which boys did they break the glass?’

- (57) *Nu purgunta-u [ki librus]_i ki Djon kunpra-[DP/DO **s**]_i.
 1PL ask(PFV)-2SG which books that Djon buy(PFV)-3PL
 Lit.: ‘*We asked you which books Djon bought them.’

- (58) a. *[Ki mininus]_i ki pulísia da-[DP/OBJ1 **s**]_i bafatada?
 which boys that police give-3PL slap
 Lit.: ‘*Which boys did the police give them a slap in the face?’

- b. *[Ki kusas]_i ki Djon da-[DP/OBJ2 **s**]_i si kretxeu?
 which things that Djon give-3PL POSS.3SG lover
 Lit.: ‘*Which things did Djon give them to his lover?’

PP pied-piping is also completely ruled out in these contexts, as the ungrammaticality of (59) illustrates.

Complex NP Island

- (59) *<sub>[PP Ku ki mudjeris]_i ki dja bu atxa [_{DP un omi}
 with which women that already 2SG find a man
 [_{CP ki papia [~~ku ki mudjeris~~]_i]]?}
 that talk(PFV)
 Lit.: ‘With which women did you find a man that talked?’</sub>

As it will be shown in detail in chap. 5, section 5.3., the resumptive strategy of CVC, both in *wh*-questions and in relative clauses, is related to the impossibility of extraction of PPs in this language (and the rejection of PP pied-piping and P-stranding with a null gap). I postpone the discussion on the properties of the resumptive pronoun 3PL *es* to chapter 5, after the description of the role played by this strategy in relative clause formation.

3.3.2. In situ *wh*-questions

In situ *wh*-questions have the particular property of exhibiting *wh*-elements (apparently) in their original merged position.

CVC allows for in situ *wh*-questions in matrix contexts with all *wh*-elements of the language (*kenha* ‘who’, *kusé* ‘what’, *kantu* ‘how.much/many’, (*na/pa*) *undi* ‘(in/to) where’, *modi* ‘how’ and *pamodi* ‘why’)¹⁶, as in (60)-(66).

¹⁶ CVC and EP behave alike in what concerns these contexts, as in (i)-(iii) for some examples in EP.

- (i) Ontem, tu viste **[quem]**? EP
 yesterday 2SG see(PFV) who
 Lit.: ‘Yesterday you saw who?’
 ‘Yesterday, who did you see?’
- (ii) Disseste **[o quê]** à Maria?
 say.2SG(PFV) what to.the Maria
 Lit.: ‘You said what to Maria?’
 ‘What did you say to Maria?’
- (iii) Isso é **[quanto]**?
 DEM be how.much
 Lit.: ‘That is how much?’
 ‘How much is that?’

- (60) a. Djon nkontra [kenha] na sinema?
 Djon meet(PFV) who in cinema
 Lit.: ‘Djon met with who at the cinema?’
 ‘Who did Djon meet with at the cinema?’
- b. Maria ka ta papia [pp ku [kenha]]?
 Maria NEG IPFV talk with who
 Lit.: ‘Maria doesn’t talk with who?’
- (61) a. E bira [kuse]?
 3SG turn(PFV) what
 Lit.: ‘S/He turned into what?’
 ‘What did s/he turn to?’
- b. Mininu ka gosta [pp di [kuse]]?
 boy NEG like(IPFV) of what
 Lit.: ‘Boys don’t like what?’
- (62) Maria ta bai [pp (na/pa) [undi]]?
 Maria IPFV go in/to where
 Lit.: ‘Maria goes (to) where?’
- (63) Mankara e [kantu]?
 peanut be how.much
 Lit.: ‘Peanuts are how much?’
 ‘How much is the peanuts?’
- (64) Kasa di Maria sta na [undi]?
 house of Maria be(IPFV) in where
 Lit.: ‘Maria’s house is where?’
 ‘Where is Maria’s house?’

(65) E [modi]?

be(IPFV) how

Lit.: 'Is how?'

'How are you?'

(66) Bu omi da-u bafatada [pamodi]?

POSS.2SG man give(PFV)-2SG slap why

Lit.: 'Your man gave you a slap in the face why?'

'Why did you husband beat you?'

In embedded contexts, however, there seems to be a great deal of variation among native speakers of CVC, in what concerns grammaticality judgments of sentences like (67) or (68), with a *wh*-word occurring inside a verbal complement clause or within a relative clause, respectively.

Verbal complement clause

(67) ^{OK/*}Djon fla-u [CP ma Maria fase [kusé]]?

Djon say(PFV)-2SG that Maria do(PFV) what

'Djon told you that Maria did what?'

Complex NP Island

(68) ^{OK/*}Maria konxe [DP kel mininu [CP ki ben di [undi]]]?

Maria know(IPFV) DET boy that come of where

Lit.: 'Maria knows a boy that comes from where?'

The variation exhibited in the grammaticality judgments of (67) and (68) may be evidence for or against covert *wh*-movement in CVC. Particularly, the speakers that judge those sentences as grammatical must allow for covert long *wh*-movement to matrix SpecCP, while the speakers that find (67) and (68) ungrammatical do not allow for that kind of movement, as their LF representations in (67') and (68') illustrate.

LF representations

(67') *_{[CP [Kusé]_i C° Djon fla-u [CP ~~kusé~~_i ma Maria fase [~~kusé~~_i]]]?}

(i) Selection requirements

If the verb of an embedded clause does not select for a question and if there is an embedded *wh*-in-situ, that *wh*-phrase can only be interpreted as belonging to the matrix clause, as in (71), with the LF representation in (72).

- (71) [Zhangsan xiangxin [shei mai-le shu]]
believe who bought books
'Who does Zhangsan believe bought books?'

LF representation

- (72) [shei_x [Zhangsan xiangxin [x mai-le shu]]]
who believe bought book
'For which *x*, Zhangsan believes *x* bought books.'
(Huang, 1982: 371)

Thus, sentence (71) must be interpreted as a root question, since the verb *mai-le* 'to buy' does not select for a question, and the *wh*-word *shei* 'who' belongs to the matrix verb *xiangxin* 'to believe' (see Cheng, 1991: 193-197, for further examples).

If the embedded verb selects for a question, the *wh*-in-situ is interpreted as belonging to the embedded clause, as in (73), and its LF representation in (74).

- (73) [Zhangsan zhidao [shei mai-le shu]]
know who bought books
'Zhangsan knows who bought books',¹⁸

LF representation

- (74) [shei_x [Zhangsan zhidao [x mai-le shu]]]
who know bought book
'For which *x*, Zhangsan knows *x* bought books.'

¹⁸ Huang refers that sentence (73) in the text is ambiguous (i.e. *shei* 'who' can be interpreted as belonging to the matrix verb *zhidao* 'to know' or to the embedded verb *mai-le* 'to buy'), but I am taking into consideration only the 'embedded' interpretation.

Therefore, in Chinese, the verb selects for a C° [+Wh] and the wh-elements move up to SpecCP in LF (in the same way as they move, for instance in English, in overt syntax).

(ii) Locality effects

As long as wh-movement is restricted to LF, Huang (1982) assumes that it is not subject to island conditions. However, he claims that not all wh-words in Chinese escape island constraints¹⁹, showing that, in this language, arguments can escape island violations while adjuncts cannot, as in (75)-(76).

Complex NP Island – Subject extraction

- (75) Botong xihuan **shei** xie de shu Chinese
 Botong like who write DE book
 ‘For which x, x a person such that Botong likes the book that x wrote.’
 (Cheng, 1991: 195)

Complex NP Island – Adjunct extraction

- (76) *Qiaofong xihuan botong **weisheme** xie de shu
 Qiaofong like Botong why write DE book
 ‘For what reason x such that Qiaofong like the book that Botong wrote for x’
 (Cheng, 1991: 196)

Huang (id., p. 385) explains such asymmetry by saying that “WH words like *what* and *who* may violate Subjacency quite freely in LF because they are NPs, while those like *why* and *how* may not because they are either PPs or APs, not NPs”²⁰.

Assuming an approach of wh-movement in LF of the wh-in-situ elements, Huang (1982) argues that argument-adjunct asymmetries can be explained by ECP,

¹⁹ According to him, “At least two WH words, *weisheme* ‘why’ and *zeme* ‘how’, are not exempt from the WH island constraint” (id., p. 384).

²⁰ The basic notion of Subjacency (or ‘cycle’, in Chomsky’s, 1977, terms) is that movement is bounded, i.e. can only cross one bounding node at the time (namely, CP or DP). The notion has been somehow updated into the notions of Barrier, in Chomsky (1986a), and Phase-Impenetrability Condition, in Chomsky (1998). See chapter 5 for further considerations.

because, in Chinese, Subjects are always lexically governed and adjuncts are not (i.e. the adjunct trace would not be properly governed²¹).

²¹ Rizzi (1990) finds the same asymmetry in French wh-in-situ constructions. According to him, *quoi* 'what' is selected by the verb *parler* 'to speak' and, by the ECP, can occur in situ. On the contrary, *pourquoi* cannot occur in situ because it is a sentential (reason) adverbial that cannot be head-governed by the verb, as in (i), suggesting that *pourquoi* must be directly base-generated in Comp.

- (i) a. Il a [parlé de **quoi**]? French
 3SG PFV speak of what
 Lit.: 'He spoke of what?'
 'What did he speak about?'
 b. *?Il a [parlé] **pourquoi**?
 3SG PFV speak why
 Lit.: 'He spoke why?'
 'Why did he speak?'
 (adapted from Rizzi, 1990: 47)

Gaétan de Saint-Moulin (p.c.) also refers to me that, in matrix wh-questions, French three year old children prefer to leave complements in situ, as in (ii), while adjuncts are fronted (or inserted by Merge), as in (iii), corroborating Rizzi's proposal.

- (ii) C'est **quoi**? French
 DEM-be what
 Lit.: 'It's what?'
 (iii) a. **Où** elle est?
 where 3SG be
 'Where is she?'
 b. **Comment** il fait?
 how 3SG do(PFV)
 'How did he do it?'

However, also based on acquisition data, Soares (2006: 273) argues that children acquiring EP produce their first wh-questions with fronted wh-phrases (since the age of 1;2.0), as in (iv).

- (iv) a. **Que** é? EP
 what be
 'What is it?'
 b. **Onde** está mé-mé?
 where be lamb
 'Where is the little lamb?'
 c. **Quem** é?
 who be
 'Who is it?'
 (adapted from Soares, 2006: 273-274)

Sentences like (iv) show that, in EP, there is no asymmetry between arguments and adjuncts. Soares (id., p. 273, fn. 46) claims further that the first wh-in-situ found in her corpus is attested at the age of 2;8.22, in a copulative structure as in (v):

- (v) É o **quê** isto? EP
 be the what DEM
 Lit.: 'Be what this?'
 'What is this?'

(iii) Scope of wh-words

According to Huang (1982), wh-words have always wide scope over other quantifiers of the clause, irrespective of the position in which they are generated, and that is possible if they move to SpecCP in LF.

Pesetsky (1987) distinguishes two kinds of wh-elements: those that are D(iscourse)-Linked (wh-phrases as *which N*) and wh-elements not D-linked (wh-words like *who*). In the line of Huang (1982), he also claims that there is LF wh-movement, but argues that only some particular wh-constituents move in that component. Specifically, in his analysis, Pesetsky argues that non D-linked wh-words move covertly, because they are quantifiers and need to take scope over the sentence, and that D-linked wh-phrases do not move at LF because they are bound by a Q-morpheme, which ensures that, in a sentence like *Which book did you read?*, “the range of felicitous answers is limited by a set of books both speaker and hearer have in mind” (Pesetsky, 1987: 108).

Cheng (1991) also argues for an LF wh-movement approach. According to her, “in-situ wh-words have to move to be interpreted properly” (id., p. 199), but, since D-linked wh-phrases escape Superiority²² and Subjacency effects, she proposes that “one possible way to resolve this conflict is to say that the movement of the D-linked phrases takes place not at LF but at a level in which these conditions will not apply. The proposal of a post-LF level is not new” (id., p. 213).

Although appealing, these LF wh-movement approaches encounter some problems. For instance, Brody (1995) and Duarte (2000 and references therein) list several counterarguments to such analyses, as the fact that in situ wh-questions can occur in strong islands, when Huang’s (1982) approach predicts that they are ungrammatical, because of ECP violations, and Pesetsky’s (1987) analysis accounts for non D-linked wh-words inside syntactic islands. Moreover, the need to postulate

²² This condition on transformations, defined by Chomsky (1973: 246, ap. Lasnik & Saito, 1992: 119) as in (i), was later subsumed under the Empty Category Principle:

Superiority condition

- (i) “No rule can involve X,Y in the structure
... X ... [_α... Z ... -WYV ...] ...
where the rule applies ambiguously to Z and Y and Z is superior to Y.”

Superiority violations accounted for the contrast between (iia.) and (iib.), where the Direct Object *what* is extracted over the Subject *who*, yielding an ungrammatical output:

- (ii) a. Who bought what?
b. *What did who buy?

movement in a post-LF level (as already proposed by Chomsky, 1982, and Safir, 1986) may be even more problematic than covert LF movement. Why do we need a level in which certain principles and conditions are inactive?

3.3.2.2. In situ wh-questions and remnant movement

In the opposite pole of LF wh-movement for in situ wh-questions, we find analyses that take wh-movement to be always overt, i.e. pre-Spell-Out.

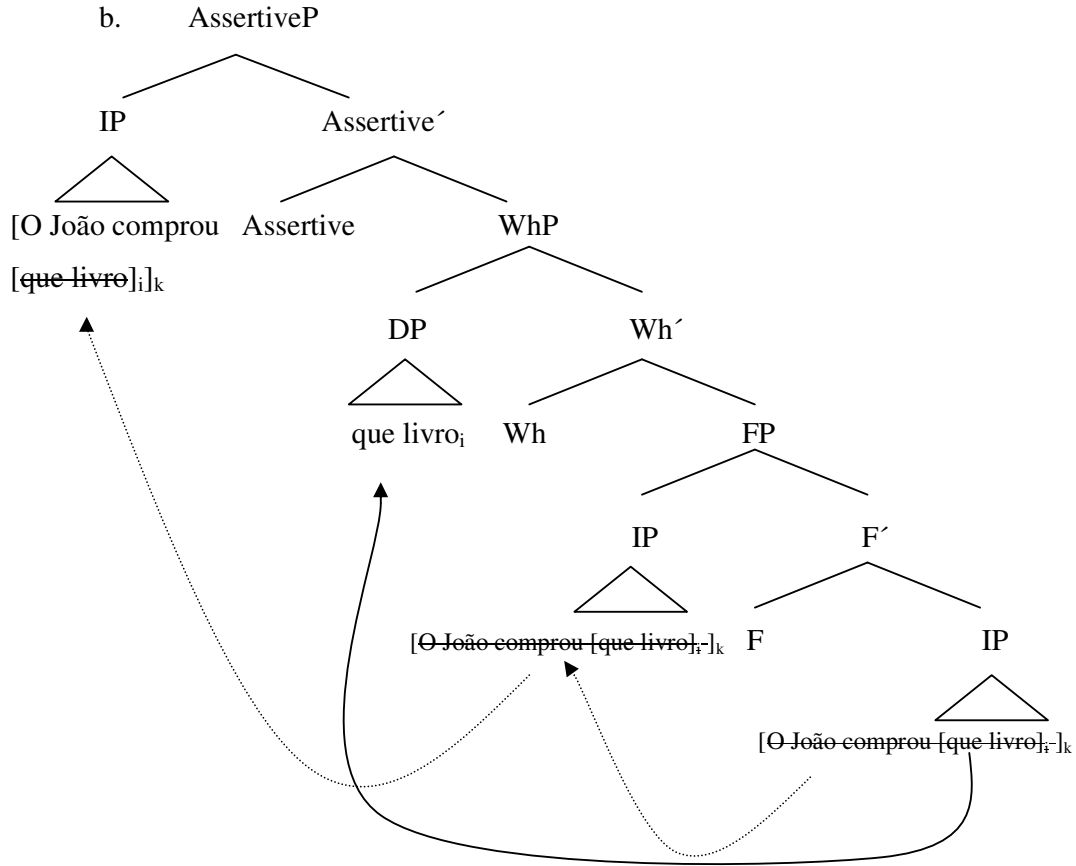
Adopting the proposal of an expanded left periphery (cf. Rizzi, 1997), Ambar & Veloso (2001) argue for a Remnant Movement analysis of in situ wh-questions in EP, French, Hungarian and Tetum. They suggest that, structurally, in situ wh-questions should be treated as any other wh-question²³. That is to say that in wh-in-situ constructions Move operates, i.e. the questioned constituent is not in its original merged position, rather it moves to a higher functional projection (namely, WhP, whose Spec hosts wh-phrases). Furthermore, Ambar & Veloso suggest that in all wh-questions an Assertive Phrase projects, accounting for presupposed information; and it “attracts the Remnant IP, to which the speaker assigns a truth-value” (id., p. 2).

According to their proposal, sentence (77) would be derived as in (78).

- (77) O João comprou que livro?
 the João buy(PFV) which book
 Lit.: ‘João bought which book?’
 ‘Which book did João buy?’

- (78) a. [_{Assertive} [o João comprou t_i]_k [_{Assertive}’ [_{WhP} que livro_i [_{Wh}’ [_{FP} t_k [_F’ [_{IP} t_k]]]]]]]
 (Ambar & Veloso, 2001: 20)

²³ The authors assume, however, that in situ wh-questions and fronted wh-questions are interpretatively distinct structures.



From Ambar & Veloso's analysis in (78), we may conclude that in situ wh-questions are only apparent, i.e. the wh-phrases are not really in situ. First, the phrase *que livro* 'which book' moves up to SpecWhP to check its [N] feature and, subsequently, the remnant IP *o João comprou [que livro]* 'João bought' moves cyclically to SpecFP and then to SpecAssertiveP, yielding the order *o João comprou que livro* 'João bought which book'.

However, the problem with an analysis involving remnant movement is that it violates the Linear Correspondence Axiom (LCA), in (79), despite being motivated by it.

Linear Correspondence Axiom

(79) A lexical item α precedes a lexical item β iff α asymmetrically c-commands β ²⁴.

²⁴ Kayne (1994: 4) defines asymmetric c-command as in (i):

Asymmetric c-command

(i) "X asymmetrically c-commands Y iff X c-commands Y and Y does not c-command X".

Putting it differently, if the remnant movement of *o João comprou* [~~que-livro~~] in (78) is to satisfy linearization requirements at Spell-Out, how does the system know what to spell? Why is the higher copy ([~~que-livro~~] within the topmost IP) deleted, while the intermediate copy at SpecWhP is spelled out, when neither c-commands the other?

Another question that arises from this approach is how does an interrogative clause contain an Assertive functional projection? In other words, questions are known to have no truth-value assignment and, if assertive properties are not present in these clauses, a functional projection Assertive must not project (in accordance with Chomsky's, 1995a, Bare Phrase Structure).

Ambar & Veloso (2001: 20-21) claim, nevertheless, that the remnant IP movement exemplified in (78) is triggered by the fact that in wh-in-situ constructions “the first part of the proposition is declarative”, and *o João comprou algo* ‘João bought something’ assigns a true value to the event²⁵.

However, an analysis along these lines raises some problems. First, in situ wh-questions (sentences that exhibit the canonical word order in, for instance, EP) require more syntactic movements than the wh-questions that involve a reordering of the canonical word order, just for analysis' sake. A theoretical model that intends to be minimal should find another way of approaching these clauses.

Second, Ambar & Veloso argue that WhP is selected by an Assertive functional node based on the interpretative contrast between wh-in-situ and fronted wh-questions, as in (80) and (81).

- (80) Q: O João comprou o quê? EP
the João buy(PFV) the what
Lit.: ‘João bought what?’
A: ?*Nada
‘Nothing.’
- (81) Q: O que comprou o João?
the what buy(PFV) the João
‘What did João buy?’

²⁵ Note that this is a distinct interpretation of Rizzi's (1997) left periphery system (cf. chap. 2, section 2.5.2.). Ambar & Veloso (id., fn. 37) propose that Rizzi's ForceP can involve different projections; particularly, in situ wh-questions can be, simultaneously, interrogative and assertive.

A: Nada

‘Nothing.’

(both adapted from Ambar & Veloso, 2001: 20)

The authors say that a wh-in-situ question like (80) does not allow for a negative answer, contrary to the fronted wh-question in (81), because of the presupposed information (i.e. if the speaker asks the question in (80) is because his background information is that *o João comprou algo* ‘João bought something’). The problem here is the confusion between assertion and presupposition: if the question in (80) is interpreted as an ‘echo’ question, the answer cannot be negative, but if it is understood as a true question, a negative answer is grammatical, because there is no background information.

Taking into consideration another example, as (82) for EP, the presupposition that *o João matou alguém* ‘João killed someone’ can be entailed by both *Foi a Maria que o João matou* ‘It was Maria who João killed’ (cf. (82a.)) and the negation of it as *Não foi a Maria que o João matou* ‘It wasn’t Maria who João killed’ (rendering (82b.), *ninguém* ‘nobody’, unacceptable). Nevertheless, given the right context, the answer in (82b.) becomes a perfect possibility and the presupposition that *o João matou alguém* ‘João killed someone’ is blocked.

[João was arrested and someone asks:]

(82) Q: Afinal, o João matou **quem?** EP

after.all the João kill(PFV) who

Lit.: ‘After all, João killed who?’

A:

a. A Maria.

b. Ninguém (ele apenas assaltou um banco).

nobody (3SG just steal(PFV) a bank

‘Nobody (he only stole a bank).’

Therefore, in situ wh-questions do not seem to require an assertive value and do not need to project AssertiveP.

Finally, an analysis of in situ wh-questions derived by remnant movement cannot account for Huang’s (1982) observation that arguments yield grammatical

As we can see in (84), the in situ wh-phrase *o quê* ‘what’ moves up to SpecWhP to check the [N] features of the Wh head projection; the IP *o Manel deu [~~o quê~~]_i a quem rapariga* ‘Manel gave to whom girl’ raises to SpecAssertiveP through remnant movement, for truth-value purposes, and the head of the relative clause *rapariga a quem* ‘girl to whom’ is extracted out of the remnant moved IP and ends up in SpecForceP, in order to type the clause as relative. The issues listed above for (78) remain, though.

The theoretical and empirical problems of an analysis that requires remnant movement make me follow another path.

3.3.2.3. In situ wh-questions without wh-movement

There is still another possible approach to wh-in-situ constructions, according to which this kind of clauses do not involve wh-movement at all (whether overt or covert).

Brody (1995) proposes a (radical) theory that dispenses with Move, maintaining the notion of ‘chain’, because it is independently motivated by the Full Interpretation Principle²⁶ and by the condition that rules the distribution of the thematic positions. Brody’s notion of ‘chain’ seems similar to Chomsky’s (1986b) CHAIN, which is an extended notion of ‘chain’ that intends to comprehend expletive-argument pairs, as in a sentence like (85).

- (85) It is unimaginable [for there to be a unicorn in the garden].
(Chomsky, 1986b: 132)

In (85) the syntactic object (*there*_i, *e*_i, [*a unicorn*]_j, *e*_j) is not a chain, but a CHAIN, consisting of the chains (*there*_i, *e*_i) and ([*a unicorn*]_j, *e*_j), where *i* = *j*. In this CHAIN, *there* binds [*a unicorn*] and the pair behaves as a chain with respect to the visibility condition²⁷, i.e. *there* must be assigned Case (from *for*) in order to receive a θ -role.

²⁶ According to Chomsky (1986b and thereafter), the Full Interpretation principle (FI) is defined as in (i).

Full Interpretation principle

- (i) “Every element of PF and LF, taken to be the interface of syntax (in the broad sense) with systems of language use, must receive an appropriate interpretation – must be licensed in the sense indicated”.
(Chomsky, 1986b: 98)

Note, however, that Chomsky (id., p. 99) does not consider FI to be “a logically necessary property of all possible languages”.

²⁷ The visibility condition states that “a lexical argument must have Case, or it will not receive a θ -role and will not be licensed” (cf. Chomsky, 1986b: 94).

Following Watanabe (1991), Brody (1995: 46) proposes a distinction between primary chains and secondary chains. Primary chains are generally taken to involve overt movement, showing Subjacency effects and being headed by a wh-phrase that checks the [+Wh] feature of C°. The chains that can bridge islands and that are assumed to involve LF movement are called secondary.

Brody (1995: 62) claims, thus, that the relation between in situ wh-elements and their scope positions must be the same in Japanese and in English, for instance. Contrary to the classic view on chains (which, I recall, escape Subjacency effects at LF²⁸), he suggests (id., p. 75) that “all wh-chains are constrained by Subjacency and that the secondary chains (of in-situ wh-phrases in English, for example) are parasitic on the primary chains that satisfy the Wh-Criterion requirement of the +WH C head”.

In Brody’s framework, the difference between LF and overt movement “has to do with the position of the “moved” contentive category” (id., p. 32), i.e. taking a chain (*P2, P1*) as example, in the pre-Spell-Out component we find the ‘contentive category’ in *P2*, while in the LF component the ‘contentive category’ is *P1*. Brody explicitly assumes that chains receive an interpretation in LF, not categories.

I will follow Brody in accepting the absence of Move in wh-in-situ clauses.

3.3.2.4. In situ wh-questions and the Clausal Typing Hypothesis

The Clausal Typing Hypothesis, proposed by Cheng (1991) as in (86), is a way of accounting for the typological distinctions among languages concerning the formation of wh-questions (namely, Mandarin Chinese and English), which goal is to exclude from languages the ‘optionality of movement’ of wh-words.

Clausal Typing Hypothesis

- (86) “Every clause needs to be typed. In the case of typing a wh-question, either a wh-particle in C° is used or else fronting of a wh-word to the spec of C° is used, thereby typing a clause through C° by Spec-head agreement.”

(Cheng, id.: 29)

²⁸ As Chomsky (1995b: 91) assumes, “ECP violations are more severe than Subjacency violations, which leave no residue at LF”.

From (86), a language like Mandarin Chinese involves no (overt) wh-movement because it exhibits question particles that license (or ‘type’) the C° [+Wh]. Meanwhile, the languages that behave like English, which display no question particles, type their C° [+Wh] by fronting a wh-phrase to SpecCP.

Brody (1995: 98) claims that this way of setting languages apart may be problematic in that languages like Hungarian (or, I may add, EP), a language without question particles but which allows for multiple wh-movement, the source of the [+Wh] feature in C° is not clear.

Capitalizing on Cheng’s ideas, although circumventing Cheng’s Clausal Typing Hypothesis ‘flaw’, Duarte (2000)²⁹, for European and Brazilian Portuguese wh-questions and following Simpson (1999), proposes that wh-phrases have to be licensed by adequate C°s, i.e. [+Q, +Wh], and that C° and the checking domain of a functional category are subject to parametrization, as stated in (87) and (88).

C parameter

(87) C is ambiguous:

- a. Yes
- b. No

Checking domain of a functional category (e.g. C°)

(88) The checking domain of a functional category is subject to parametrization.

(both from Duarte, 2000: 3)

²⁹ In this paper, Duarte (id.) notes that both EP and BP exhibit ‘focalized’ wh-questions as in (i) and (ii), i.e. wh-questions whose C° is phonetically filled with *é que* ‘is that’ (equivalent to *ki* ‘that’ in CVC), are an effect of the loss of V+I-to-C movement.

(i) O que **é que** o corvo comeu? EP
the what be that the crow eat(PFV)
Lit.: ‘What is that the crow ate?’
‘What did the crow eat?’
(Duarte, 2000: 2)

(ii) O que **é que** você viu na festa? BP
the what be that 2SG see(PFV) in.the party
Lit.: ‘What is that you saw at the party?’
‘What did you see at the party?’
(Duarte, id., p. 8)

Based on Lopes-Rossi’s (1993) diachronic work on BP questions, Duarte (2000) argues that these ‘focalized’ *é que*-questions are an alternative strategy used to check [+Q, +Wh] features of C°, which is only [+F(ocus)].

Mandarin Chinese, a language with obligatory wh-in-situ, instantiates the negative (*no*) value for the C parameter, because it exhibits an unambiguous C° [+Q, +Wh], and any sentence c-commanded by C [+Q, +Wh] is its checking domain. English, a language with obligatory wh-movement, displays an ambiguous (*yes*) C° [±Q, ±Wh] and its checking domain is not strictly local, because it allows for wh-in-situ in multiple wh-questions, as long as C° is disambiguated by a wh-phrase in SpecCP.

A language like Portuguese challenges this typology, since it exhibits a positive value for C (i.e. C° is ambiguous) and its checking domain is not strictly local, i.e. Portuguese allows for wh-in-situ in multiple wh-questions, as in (89).

- (89) [CP [Que político]_i [CP [~~que político~~]_i disse [o quê]]? EP
 which politic say(PFV) the what
 ‘Which politic said what?’

Nevertheless, contrary to English, (European and Brazilian) Portuguese allows for wh-in-situ in matrix or embedded non-multiple wh-questions, as in (90).

- (90) a. Tu viste [o quê]? EP
 2SG see(PFV) what
 Lit.: ‘You saw what?’
 ‘What did you see?’
- b. O João disse que encontrou [quem]?
 the João say(PFV) that find(PFV).3SG who
 Lit.: ‘João said that he found who?’
 ‘Who did João say that he found?’

To account for cases like (90), impossible in English, Duarte (2000) suggests that E/BP (and some other Romance languages) exhibit an unambiguous null C° [+Q, +Wh], which is also [+D-linked], in the line of Pesetsky (1987), because of the ‘echo’ reading associated with those sentences. Note, however, that the sentences in (90) do not necessarily receive an ‘echo’ reading, as the context of sentence (91) below illustrates.

[João sees Maria at the supermarket and he asks:]

- (91) Então foste ao cinema ontem [**com quem**]? EP
 after.all go(PFV).2SG to.the cinema yesterday with who
 Lit.: ‘Yesterday, you went to the cinema with who after all?’

Although (91) is a ‘real’ question, the speaker has some kind of access to previous discourse, since he knows that Maria was going to the cinema with someone, and the [+D-linked] feature of the null C° is still needed.

Such an analysis is tempting, since it seems able to offer an explanation for in situ wh-questions. In the next section, I will sketch an account of CVC wh-interrogatives based on this framework.

3.4. Towards an analysis of wh-questions in CVC

We have seen so far that CVC allows for several wh-movement question strategies, such as gap (with or without PP pied-piping), PSST and P-chopping, which is in fact a subcase of gap without PP pied-piping, and that the language also exhibits non wh-movement question strategies, as resumption and wh-in-situ (as I will suggest in this section).

I assume that the wh-movement strategies of question formation are accounted for by a mechanism of ‘regular/classic’ wh-movement. In other words, considering Cheng’s (1991) Clausal Typing Hypothesis in (86) above, I claim that the wh-movement strategies of wh-questions of CVC are typed [+Q] through Spec-head agreement of a fronted wh-phrase and C° , since the language does not have wh-particles that can type the clause³⁰.

In the previous chapter, section 2.3.2., it was shown that the wh-constituents of CVC are usually followed by an overt complementizer *ki* ‘that’³¹ and do not display VS

³⁰ CVC does not behave like Mandarin Chinese, which has wh-particles as *ne* in (i) and therefore does not need for wh-movement to apply.

(i) Qiaofong mai-le sheme **ne**. Mandarin Chinese
 Qiaofong buy-PFV what Q_{WH}
 ‘What did Qiaofong buy?’
 (adapted from Cheng, 1991: 30)

³¹ Specifically, I referred that *ken/kenha* ‘who’, *kusé* ‘what’ and *ki N* ‘which N’ obligatorily co-occur with *ki* for agreement purposes (*ken/kenha* and *kusé* are nominal expressions and *ki* has a [+D] feature), while

order (i.e. V+I-to-C° movement), behaving like Portuguese (European and, especially, Brazilian³²) in what concerns these constructions. The complementizer *ki*, which introduces wh-questions (relative clauses, nominal and adjectival complement clauses, and clefts), is positively specified for the formal features [+D, +T] (cf. chap. 2, table 6.), but its features [±Q, ±Wh] are ambiguous. Following Duarte's (2000) analysis, I suggest that CVC receives the value *yes* for the C parameter (i.e. it is ambiguous) and, thus, the wh-movement in CVC questions is a mechanism of disambiguating C°, checking the [+Q, +Wh] features of *ki*, through a Spec-head agreement relation.

Furthermore, CVC exhibits in situ wh-questions, as described in section 3.3.2. above. These constructions receive, typically, an 'echo' reading³³, as the capital letters of the wh-word in (92) show, by signaling the pitch accent typical of 'echo' readings.

- (92) Q: Bu ta bai kasa ku KENHA?³⁴
 2SG IPFV go marry with who
 Lit.: 'You are going to marry with who?'
 'Who are you going to marry?'

It seems that the preferable reading of (92) is the 'echo', since native speakers do not provide answers with negative words as *ningen* 'nobody', which function as wide scope quantifiers (cf. (93b.)).

- (93) A: a. (Ku) Maria.
 with Maria
 b. # (Ku) ningen.
 with nobody

modi 'how' and *pamodi* 'why' optionally co-occur with *ki* (perhaps because they are adverbial wh-words), and *undi* 'where' preferably does not co-occur with *ki* because of its [+LOC] status.

³² According to Duarte (2000), BP is in an advanced stage of loss of V+I-to-C° movement, where the sequence *é que* has been reanalyzed as *que* 'that' and both grammaticalize the [+F] feature of C°.

- (i) Como **que** você veio? BP
 how that 2SG come(PFV)
 Lit.: 'How that you came?'
 'How did you come?'
 (adapted from Duarte, 2000: 8)

³³ In fact, Baptista (2002: 154-155) also argues that in situ wh-questions of CVC "can be produced as an echo question expressing surprise or incomprehension, or can be interpreted as a wh-question".

³⁴ CVC seems to behave like EP, language in which the echo reading is associated to an intonational contour that presents a rising pitch accent over the focused constituent (cf. Brito, Duarte & Matos, 2003: 475).

Let me stress, however, that given the right context wh-in-situ constructions do allow for negative words as possible answers, excluding the ‘echo’ reading, as in (94).

[Djon was arrested and someone asks]

(94) Q: Afinal, Djon mata **kenha**?

after.all Djon kill(PFV) who

Lit.: ‘After all, Djon killed who?’

A:

a. Maria.

b. **Ningen** (e so roba banku).

Nobody (3SG only steal(PFV) bank

‘Nobody (he only stole the bank).’

Moreover, in situ wh-questions with a copula verb, as (63) repeated here as (95), do not necessarily receive an ‘echo’ reading, a fact that must be related to a property of these constructions.

(95) [Mankara]_i e [SC [DP/SBJ ~~mankara~~]_i [PRED **kantu**]]?

peanut be how.much

Lit.: ‘Peanuts are how much?’

‘How much is the peanuts?’

As Rizzi (1990: 48) argues, the predicate of a selected small clause can occur in situ because it is head-governed from the main verb, not giving rise to Empty Category Principle (ECP) violations. Recall that, for Rizzi, the ECP is a principle consisting of both formal and semantic licensing, as in (96), and it is subordinate to locality conditions on unambiguous government, as the Relativized Minimality in (97).

Empty Category Principle

(96) “A nonpronominal empty category must be

(i) properly head-governed (Formal licensing)

(ii) Theta-governed, or antecedent-governed (Identification).”

(Rizzi, 1990: 74)

Relativized Minimality

- (97) “X α -governs Y only if there is no Z such that
(i) Z is typical potential α -governor for Y,
(ii) Z c-commands Y and does not c-command X.”
(Rizzi, 1990: 7)

I have assumed above that CVC fronted wh-questions involve movement of the wh-phrase up to SpecCP in order to disambiguate C° through a Spec-head agreement relation.

Considering the possibility of in situ wh-questions without an ‘echo’ reading in CVC, we have to account for wh-in-situ constructions in this language. Do they involve covert movement (in LF, as discussed in section 3.3.2.1. above) or does an analysis with no wh-movement but with ‘typing’ (as in § 3.3.2.4.) explain the grammaticality of these constructions?

I suggest that in situ wh-questions of CVC (i) do not involve overt or covert wh-movement, along the lines of Brody (1995)³⁵; (ii) the matrix C° is null and unambiguously [+Q, +Wh]; and (iii) an A'-binding relation operates.

(i) No wh-movement

Assuming that wh-in-situ constructions of CVC do not involve overt movement of a wh-phrase to SpecCP [+Q, +Wh] (i.e. rejecting a remnant movement approach), we can suppose that covert wh-movement operates in these constructions, as in (99) for the LF representation of (98).

- (98) Djon odja [kenha]?
Djon see(PFV) who
Lit.: ‘Djon saw who?’
‘Who did Djon see?’

³⁵ Torrence (2005) also considers that Wolof allows for wh-in-situ in chains that do not involve movement, and argues that the multiple occurrences of *u*-forms in these chains are due to the fact that “*u*-forms are agreeing complementizers”.

(i) [CP **Y.o** o foog [CP **y.u** Bintë wax **kan** [CP **y.u** Isaa di tog]]]. Wolof
CL.u 2SG think CL.u Binta say who CL.u Isaa IPFV cook
“What(pl) do you think that Binta told who that Isaa will cook?”
(adapted from Torrence, 2005: 102)

LF representation

- (99) [CP [Kenha]_i [TP Djon odja [DP [~~kenha~~]_i]]].

In (99), the wh-word *kenha* ‘who’ moves up to SpecCP in order to have scope over the sentence, c-commanding and binding its variable (i.e. the lower copy).

Nevertheless, the presence of a wh-in-situ inside an embedded clause or a syntactic island yields different grammaticality judgments from native speakers: some judge those sentences as grammatical while others exclude them, which means that to explain these constructions by covert wh-movement may not be the right solution. Consider sentences (67) and (68), repeated here as (100) and (101).

Verbal complement clause

- (100) ^{OK/*}Djon fla-u [CP ma Maria fase [kuse]]?
 Djon say(PFV)-2SG that Maria do(PFV) what
 ‘Djon told you that Maria did what?’

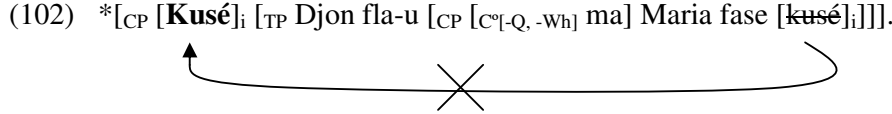
Complex NP Island

- (101) a. ^{OK/*}Maria konxe [DP kel mininu [CP ki fase [kuse]]]?
 Maria know(IPFV) DET boy that do(PFV) what
 Lit.: ‘Maria knows the boy that did what?’
- b. ^{OK/*}Maria konxe [DP kel mininu [CP ki ben
 Maria know(IPFV) DET boy that come(PFV)
 di [undi]]]?
 of where
 Lit.: ‘Maria knows the boy that came from where?’

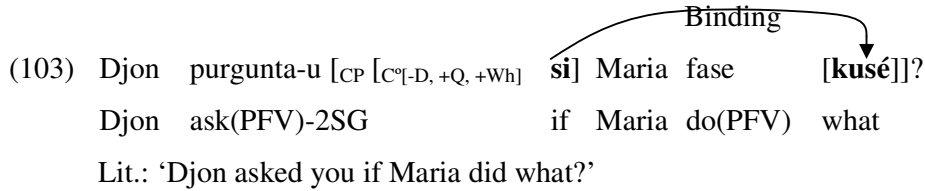
In what concerns sentence (100), we note first that the Direct Object *kuse* ‘what’ occurs within a verb complement clause that is selected for by the matrix verb *fla* ‘to say’ and is introduced by an overt declarative complementizer *ma* ‘that’ [-Q, -Wh]. We may argue that the speakers that judge (100) as ungrammatical reject it based on the fact that (i) the complementizer *ma*, being [-Q, -Wh], cannot check the [+Wh] feature of *kuse* and, in their grammar, there is no matrix null C° [+Q, +Wh] able to type the clause as a

question and licensing *kusé*; or (ii) the grammar of these speakers does not allow for covert long wh-movement, as in (102).

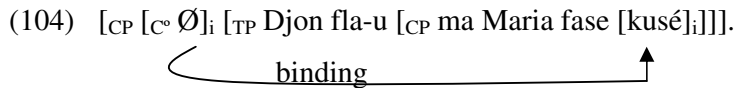
LF representation



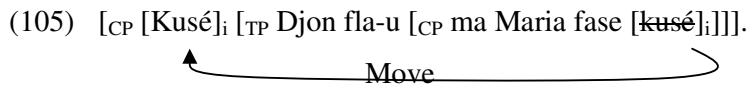
The incompatibility between the declarative complementizer *ma* and the wh-word *kusé* is supported by the fact that speakers accept sentences with wh-in-situ embedded in clauses introduced by [+Q, +Wh] overt complementizers, as *si* ‘if’ in (103).



For those speakers who find sentence (100) to be grammatical, we may suggest that their grammar displays (i) a matrix null C° [+Q, +Wh] that binds the wh-word *kusé*, as in (104), or (ii) the grammar of these speakers allows for covert long wh-movement, as in (105).

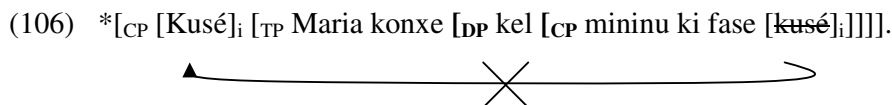


LF representation



Note also that the speakers that reject (100) also exclude (101), which means that they do permit covert wh-movement across two boundary nodes, as represented in (106).

LF representation



However, taking the ungrammaticality of (101) to be a consequence of covertly crossing two boundary nodes (CP and DP), as in (106), is a mistake, since Subjacency does not apply at LF³⁶. Furthermore, according to Huang (1982), sentence (101a.) should be good, given that *kusé* ‘what’ is properly head-governed by the verb *fase* ‘to do’. However, contrary to what Huang’s analysis predicts, in these contexts there is no asymmetry between arguments (*kusé* ‘what’ in (101a.)) and adjuncts (*undi* ‘where’ in (101b.)), since both can or cannot occur depending on other licensing mechanisms.

An argument that can be adduced against covert wh-movement in these clauses comes from multiple wh-questions. In this kind of construction, there is only one SpecCP position available and one of the wh-elements occurs in that position while the others have to stay in situ, even in LF, since that position cannot be filled by two or more wh-elements³⁷.

In CVC, multiple wh-questions are not possible³⁸, as (107) and (108) illustrate.

³⁶ Note that it is not the case that CVC does not exhibit syntactic islands effects. For instance, the Left Dislocation of a Hanging Topic (cf. Cinque, 1990) is not sensitive to islands, as in (i), while the Clitic Left Dislocation is sensitive to strong islands, as in (ii):

Adjunct Island

- (i) [Lura]_i, kes mudjeris kunpra bidjeti na merkadu negru [_{CP} p’es obi-[I]_i].
Lura, DET women buy(PFV) ticket in market black for-3PL listen-3SG
Lit.: ‘Lura, the women bought the tickets in the black market for them to listen to her.’

Complex NP Island

- (ii) *[Storias di Nhu Lobu]_i, nunka bu ka nkontra [_{DP} un mininu
stories of Mr. Lobu never 2SG NEG find(PFV) a boy
[_{CP} ki ka ta konxe-[s]_i.
that NEG IPFV know-3PL
Lit.: ‘Stories of Mr. Lobu, you never found a boy that doesn’t know them.’

³⁷ However, Huang (1982) accounts for this kind of constructions in Chinese, as in (i), assuming that “there is only one COMP but two WH words, so both must be moved into it”.

- (i) Shei mai-le sheme? Chinese
who bought what
‘For which x, for which y, x bought y.’
(Huang, 1982: 383)

³⁸ When I elicited these sentences, the informants suggested an alternative without the multiple strategy, with an indefinite Primary Object *algen* ‘someone’, as in (i), or with an indefinite Secondary Object *algun kusa* ‘something’, as in (ii):

- (i) [Kusé]_i ki Djon da [_{DP/OBJ1} **algen**] [kusé]_i?
what that Djon give(PFV) someone
‘What did Djon give someone?’
- (ii) [Kenha]_i ki Djon da [~~kenha~~]_i [_{DP/OBJ2} **algun kusa**]?
who that Djon give(PFV) some thing
‘Who did Djon give something?’

I also recorded a slight acceptance for multiple wh-questions when the previous discourse causes some strangeness to the hearer, as in (iii):

[Someone says that Djon killed Maria. Djon and Maria were a very peaceful couple, and very in love. Then, the speaker asks:]

- (iii) ??[Ken]_i ki [~~ken~~]_i mata [kenha]?
‘Who did Djon give something?’

- (107) a. ***[Kenha]_i** ki _[DP/SBJ] ~~kenha~~_i kunpra _[DP/DO] kusé]_i?
 who that buy(PFV) what
 ‘Who bought what?’
- b. ***[Kusé]_i** ki Djon da _[DP/OBJ1] **kenha** _[DP/OBJ2] ~~kusé~~_i?
 what that Djon give(PFV) who
 Lit.: ‘What is that Djon gave who?’
 ‘What did Djon give to whom?’
- (108) ??/***[Ki librus]_i** ki Maria da _[DP/OBJ1] **ki mininus** _[DP/OBJ2] ~~ki librus~~_i?
 which books that Maria give(PFV) which boys
 Lit.: ‘Which books is that Maria gave which boys?’
 ‘Which books Maria gave to which boys?’

As sentences (107)-(108) show, neither non D-linked nor D-linked wh-elements can be extracted leaving another wh-constituent in situ (and notice that we cannot resort to Superiority effects to explain such impossibility, as (107a.)³⁹ shows). The ban on multiple wh-questions in CVC suggests that once one wh-phrase has moved up to SpecCP, (i) C° cannot license the other wh-phrase left in situ because the complementizer *ki* has a strictly local checking domain (i.e. it only checks its features under a Spec-head relation); and (ii) there is no covert wh-movement of a wh-phrase to SpecCP⁴⁰, as represented in (109) for sentence (108):

 who that kill(PFV) who
 ‘Who killed who?’

³⁹ Recall that according to the Superiority condition, *kenha* in (107a.) in the text would be the perfect constituent that the wh-movement could apply to, since it is superior to the DO *kusé*.

⁴⁰ For multiple wh-fronting languages, as Bulgarian or Serbo-Croatian, see Rudin (1988, ap. Bošković, 1998) for an approach in which the fronted wh-phrases in Bulgarian are analyzed as a single constituent in SpecCP, while in Serbo-Croatian only the first fronted wh-phrase occurs in SpecCP and the other fronted wh-phrases are adjoined to IP, as in (ii) and (iii), respectively.

(ii) a. Koj kogo vižda? Bulgarian
 who whom sees
 ‘Who sees whom?’

b. Ko koga vidi? Serbo-Croatian
 who whom sees

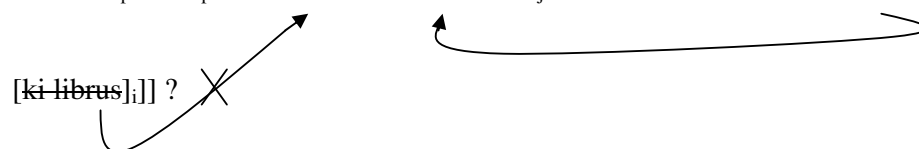
(iii) a. [_{CP} [_{SpecCP} [_{SpecCP} Koj] kogo] [_{C'} vižda]]?
 b. [_{CP} Ko [_{C'} [_{IP} koga [_{IP} vidi]]]]?
 (Bošković, 1998: 1)

LF representation

(109) a. * $[_{CP} [_{Ki} \text{ librus}]_i [_{C^\circ} \text{ ki}] [_{TP} \text{ Maria da } [_{ki} \text{ mininus}] [_{ki} \text{ librus}]_i]]?$



b. * $[_{CP} [_{SpecCP} [_{SpecCP} \text{ Ki librus}]_i [_{ki} \text{ mininus}]_j] [_{C^\circ} \text{ ki}] [_{TP} \text{ Maria da } [_{ki} \text{ mininus}]_j]$



I propose, then, that CVC does not allow for covert wh-movement and that only a null C° has the power of licensing wh-in-situ.

(ii) Null C° [+Q, +Wh]

As we have seen, CVC exhibits matrix wh-in-situ constructions without wh-movement. In these cases, there is no overt complementizer able to license the wh-phrase. Nevertheless, CVC data involving the wh-words *kenha* ‘who’ and *kusé* ‘what’ gives us evidence in favor of a null C° . Recall that in the previous chapter (sections 2.3.2.1. and 2.3.2.2.), I argued that *kenha* is preferred over *ken* in wh-in-situ constructions because *kenha* is a complex wh-word that results from the grammaticalization of the bare wh-word *ken* plus part of the emphatic expression *e ki* ‘is that’, derived as *ken* + *e* (copula verb) ‘who + is (that)’. Just like *kenha*, it was suggested that *kusé* is a complex interrogative pronoun that is the output of a grammaticalization process of *kusa* + *e* ‘thing is (that)’.

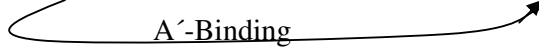
According to Cheng & Rooryck (2000), some languages (like French) exhibit apparent optionality between wh-movement and wh-in-situ. In their analysis, if a *yes/no* intonation morpheme is present in the initial Numeration, it is merged in C° and the wh-words must stay in situ, otherwise, wh-movement to SpecCP is needed to check the [Q] feature of C° . And in the same way as Cheng & Rooryck (2000: 18) noted that “in situ wh-questions have different interpretations from the wh-questions involving movement”, wh-in-situ constructions of CVC are usually interpreted differently from fronted wh-questions⁴¹.


⁴¹ Reglero (2005: 334), for Spanish, also argues that the distribution of in situ wh-phrases in this language is governed by phonological properties (given that Spanish wh-in-situ constructions present a non-neutral word order), specifically, they “need to appear last within their intonational phrase”.

Considering this, I assume that CVC grammar contains a null C° (see also chap. 2, section 2.5.1.7.) that, in the case of embedded wh-in-situ, creates a (A')-binding chain with the wh-phrase at the foot position⁴².

(iii) A' -binding

Having rejected covert (and remnant) wh-movement in CVC, the variation in the grammaticality judgements of (100) and (101) must be accounted for considering that in the grammar of the speakers that produce/accept those sentences occurs a null C° that is able to license wh-in-situ through a mechanism of (A')-binding, as in (110), for a matrix wh-in-situ, and (111) for an embedded wh-in-situ.

(110) $[_{CP} [C^\circ[+Q, +Wh] \emptyset]_i [_{TP} \text{Djon papia } [_{PP} \text{ku } [_{DP[Q, +Wh]} \text{kenha}]_i]]]?$


(111) $[_{CP} [C^\circ[+Q, +Wh] \emptyset]_i [_{TP} \text{Maria konxe } [_{DP} \text{kel } [_{CP} \text{mininu ki fase } [_{DP[+Q, +Wh]} \text{kusé}]_i]]]]?$


Particularly, in CVC, the checking domain of an unambiguous null C° is not strictly local, allowing for a wh-element to occur in situ and establishing with it a binding relation.

Summing up, I claim that the distinction between fronted wh-phrases and wh-in-situ in CVC is the setting of the C parameter, as schematized in table 2.

⁴² A relation that resembles Aoun & Li's (1986) proposal of Generalized Binding, according to which the wh-phrase is treated as a potential anaphor, as in (i):

Generalized Binding

- (i) a. "A wh-in-situ such as *why* in adjunct position must have an antecedent (i.e. must be antecedent governed) in the minimal clause in which it occurs.
 b. A wh-in-situ such as *who* or *what* in argument position need not have a local antecedent in the minimal clause in which it occurs."
 (Aoun & Li, id., p. 49)

However, as noted above, the argument-adjunct asymmetry expressed in (i) does not show up in CVC embedded wh-in-situ constructions.

Table 2. Clausal typing and the *C* parameter in CVC

Wh-questions	C parameter	Checking domain of C°	Wh-Complementizers
Wh-movement	yes	Strictly local	<i>ki</i>
Wh-in-situ	no	Not strictly local	Ø

We conclude from table 2. that CVC behaves differently from Mandarin Chinese, English and EP, since when C° is occupied by the wh-complementizer *ki* it must be disambiguated by a DP_{wh} in SpecCP, through a Spec-head Agree relation; and when C° is occupied by a null wh-complementizer specified for [+Q, +Wh], it is capable of licensing the wh-in-situ through A'-binding. Thus, it is the nature of the wh-complementizer that triggers wh-movement or not.

3.5. Summary

In this chapter we have seen that CVC is a language that allows for several types of wh-question strategies and that none of them display Subject-Object or Complement-Adjunct asymmetries. We have also reached the conclusion that CVC has two processes of clause typing. First, by moving the wh-phrase to SpecCP; second, by merging a null complementizer in the matrix C°, which binds the wh-in-situ.

Table 3. summarizes the topics discussed in this chapter stressing on the dual behavior of in situ wh-questions when inside syntactic islands.

Table 3. *Wh-question strategies, grammatical functions and syntactic environments*

Wh-question strategies			Grammatical functions	Syntactic islands	
				Outside	Inside
With Wh-movement	With pied-piping	PP + null gap	SBJ	✓	*
			OBJ		
			OBL		
	Without pied-piping	DP + null gap	SBJ	✓	*
			OBJ		
		PSST	OBL	✓	*
		P-chopping	OBL	✓	*
Without Wh-movement	in situ		SBJ	✓	⊙ */✓
			OBJ		
			OBL		
	Resumption		OBL	*	✓

In section 3.2., I showed that CVC exhibits four wh-question strategies, namely, ‘classic’ gap, (null) gap with PP pied-piping, PSST and P-chopping. The ‘classic’ gap strategy applies to DPs (irrespective of their grammatical function) and it is in complementary distribution with the other three strategies. The wh-question strategies of gap with PP pied-piping, PSST and P-chopping are alternative processes that apply to PPs, yielding distinct outputs. Specifically, the first one involves pied-piping of the questioned PP to SpecCP, leaving a null gap (copy) at the extraction site; the second strategy (i.e. PSST) consists of moving the DP selected by a preposition to SpecCP and leaving the preposition in its original site followed by a spelled out 3SG copy; finally, the third strategy (P-chopping) applies to PPs headed by ‘light’ prepositions, moving to SpecCP the DP selected by it and, instead of spelling out the fronted complement of the preposition through a 3SG copy, deletes the stranded preposition at PF. I also argued that all of these strategies involve overt wh-movement, since they are excluded from syntactic islands contexts.

In section 3.3., I suggested that CVC also displays wh-question strategies that do not involve wh-movement, as resumption and wh-in-situ. In what concerns resumption, we observed that it only applies to PPs that occur inside syntactic islands. In these contexts, the occurrence of a resumptive pronoun (3SG/PL) after the preposition that

heads the questioned constituent yields good derivations and it is the unique possible strategy.

Regarding wh-in-situ constructions of CVC, we have seen that they possibly occur in matrix and embedded clauses and with all wh-elements of the language. In non-copulative matrix clauses, the wh-in-situ typically receives an ‘echo’ reading, but it can also be interpreted as a ‘real’ question. In embedded clauses, the behavior of in situ wh-phrases is not so stable and there seems to be two grammars: one that yields good derivations with wh-in-situ in complement clauses or syntactic islands; and the other in which those derivations crash.

In section 3.4., arguing against covert and remnant wh-movement for wh-in-situ in CVC, I assumed that (i) the wh-fronting question strategies are typed [+Q] by overt wh-movement of a wh-phrase to SpecCP, because the language sets *yes* for the C parameter and the checking domain of the (wh-)complementizer *ki* is strictly local; and (ii) in situ wh-questions do not involve (overt or covert) movement, exhibiting a matrix null C° which sets *no* for the C parameter and its checking domain is not strictly local.

4. Restrictive Relative Clauses in Cape Verdean Creole

4.1. Introduction

Within the realm of *wh*-constructions, relative clauses constitute an extremely puzzling empirical domain, both because of their complexity and of the theoretical challenge of these constructions.

In this chapter I aim to present the relativization strategies that CVC exhibits, such as null gap, PSST, P-chopping and resumption, and to discuss two (recent) proposals for the structure of restrictive relative clauses: the complement-of-N^o and the [_{DP} D^o CP] analyses.

4.2. Relativization Strategies

The relativization process in CVC is of both descriptive and typological significance, given its lack of a thorough description.

According to Comrie (1989:148), “a given language may have more than one type of relative clause construction in its over-all battery of relative clause formation possibilities. (...) The distribution of types within a language, however, is not completely arbitrary (...)”¹.

¹ Since relative clauses can differ a lot crosslinguistically, De Vries (2001: 3) proposes a chart of parametric variation on relative clauses which, theoretically, admits 4608 types of relative clauses (because there are correlations between the parameters), as illustrated on (i):

- | | | |
|-----|--|----------------------------------|
| (i) | a. kind of modification/relation: | restrictive, appositive, degree |
| | b. hierarchical status of RC: | embedded within DP, correlative |
| | c. presence of head: | headed/free relatives |
| | d. presence of relative pronoun: | yes/no |
| | e. presence of complementizer: | yes/no |
| | f. presence of resumptive pronoun: | yes/no |
| | g. hierarchical position of head: | externally/internally headed RCs |
| | h. linear order of head and RC: | head initial/final relatives |
| | i. inflectional completeness of RC: | finite/participial relatives |
| | j. position of Det w.r.t. N and RC: | initial/middle/final |
| | k. position of (Case) markers, if any: | on N, on N <i>and</i> RC |

Observing CVC relative clauses pattern, this chart would be parameterized as in (ii):

Relative clauses in CVC differ as a consequence of the interaction between syntactic and semantic factors. Particularly, each type of restrictive relative clause may involve one or more strategies that obey some specific conditions, as table 1. presents.

Table 1. Syntactic conditions on the formation of restrictive relative clauses

Relativization	With A'-Movement	With pied-piping	PP + empty variables (null copies)
		Without pied-piping	DP + empty variables
			DP + spelled-out traces (copies)
			P-Chopping
	Without A'-Movement	Resumption	

Taking into account table 1., the next step is to know under which conditions each strategy is adopted.

As any other language, relative clause formation in CVC is a very 'rich' (i.e. diverse) and, especially, challenging field, because some of the relativization strategies available in CVC involve wh-movement and its remnants (copies). Typologically speaking, CVC exhibits restrictive, appositive and free relatives (cf. (1)-(3), respectively), introduced by complementizers or relative pronouns.

(ii)	a. kind of modification/relation:	restrictive, appositive, degree
	b. hierarchical status of RC:	embedded within DP
	c. presence of head:	headed/free relatives
	d. presence of relative pronoun:	yes
	e. presence of complementizer:	yes
	f. presence of resumptive pronoun:	yes
	g. hierarchical position of head:	externally headed RCs
	h. linear order of head and RC:	head initial relatives
	i. inflectional completeness of RC:	finite/nonfinite relatives
	j. position of Det w.r.t. N and RC:	initial
	k. position of (Case) markers, if any:	-

Nevertheless, to set these parameters for CVC tell us nothing about the mechanisms of the relativization process of the language and, thus, I will not base the analysis of relative clauses in CVC on this chart.

- (1) [DP Kes **ki** e furmadu na Estudos Portugueses]
 DET person that be formed in Studies Portuguese
 ta bai ser prumuvidu.
 IPFV go be promoted
 ‘The people who are graduated in Portuguese Studies are going to be promoted.’
- (2) [DP **Purtugês**, **ki** nu ta prende óki nu bai skóla],
 portuguese that 1PL IPFV learn hour-that 1PL go school
 é língua sugundu.
 be language second
 ‘Portuguese, which we learn when we go to school, is the second language.’
 (Veiga, 2005: 5)
- (3) [DP **Ken ki** podeba] ta faseba ropa nobu pa bá misa.
 who that can IPFV do clothe new to go mass
 ‘Whoever could made new clothes to go to the mass.’
 (Santos, 1999: 7)

This chapter will focus exclusively on (headed) restrictive relative clauses because these are proximal to D-linked wh-questions, which makes it possible to establish some connections between them.

Semantically, restrictive relative clauses intervene in the construction of the referential value of the nominal expression that they modify, restricting it, as *pisoa* ‘person’ in (1), and they convey a hypothetical value when the relative clause modifies a bare noun and involves an Individual/Kind-level predicate, as in (4)².

² See Alexandre & Soares (2005) on the different interpretations of bare nouns in Subject position in CVC.

- (4) Kel mininu-li ta fase sempri mesmu kusa:
 DEM boy-PROX I-LEVEL do always same thing
 [DP (*un/*kel) **katxor** [CP k'e ta odja na rua]]
 (DET) dog that-3SG I-LEVEL see in street
 e ta leba pa kasa.
 3SG I-LEVEL take to house
 'This boy always does the same thing: every dog that he finds in the street(s),
 he takes home.'
 (adapted from Alexandre & Soares, 2005: 344)

In order to convey the intended hypothetical value, in Romance languages, the relative clause of sentence (4) would involve the Subjunctive Mood (e.g. EP: *cão que ele encontra na rua* / **cão que ele encontra na rua* 'every dog that he finds in the streets'). Although CVC does not have Subjunctive, *katxor* 'dog' in (4) is interpreted as [-Specific] and the relative clause displays a Habituality reading³.

Moreover, the head noun of the restrictive relative clause in CVC may be bare, i.e. with a null D°, and in this case it receives a Habituality reading, as *katxor* in (4) above or *flor* 'flower' in (5)⁴.

- (5) [DP D° **Flor** ki bu panha] e mutu bunitu.
 flower that 2SG catch be very beautiful
 'Flowers that you catch are very beautiful.'

CVC also allows for the quantification of the head noun of restrictive relative clauses, as *algen/tudu algen* 'someone/everybody' and *ningen* 'nobody' in (6)-(7), a nominal

³ Note that appositive relative clauses cannot receive a hypothetical value, because they do not restrict the referential value of the head noun and function as a commentary of the speaker towards the head proper noun (e.g. *Djon*) that they modify, as in (i).

(i) *Djon, ki ta doensi, ka ta bai trabadju.
 Djon that IPFV sick NEG IPFV go work
 '*Djon, who gets sick, is not going to work.'

⁴ According to Torrence (2005: 145, fn. 6), in Wolof, "bare nouns may also be used as indefinites, typically generics", as in (i).

(i) Di-na-a bëgg doom j-u-mu-y jëkk-ë am. Wolof
 di-na-1SG love child CL-u-3SG-di be.first-a have
 'I will love the first child that she has.'

expression quantified as *tudu* ‘everything’ and *nada* ‘nothing’ in (8)-(9), or even a determiner followed by ‘nominal ellipsis’, as *kes* ‘the.PL’ in (10)⁵.

- (6) a. [_{DP} **Algen** ki tene dór d’obidu] ta po-l
 someone that have(IPFV) pain of-ear IPFV put-3SG
 undi e tene dór.
 where 3SG have(IPFV) pain
 ‘Someone whose ears ache put it where he needs.’

- b. [_{DP} **Tudu algen** ki sta li] tene pré-sa.
 every someone that be PROX have(IPFV) hurry
 ‘Everyone that is here is in a hurry.’

(Both: Brüser & Santos, 2002: 773 and 83)

- (7) Ê un zóna rakupeládu, ka ten [_{DP} **ningen**
 be a place isolate.du NEG have(IPFV) nobody
 [_{CP} ki ta mora la]].
 that IPFV live there
 Lit.: ‘It is an isolated place; it has nobody that lives there.’
 ‘It is an isolated place, nobody lives there.’

(Brüser & Santos, 2002: 649)

- (8) E toma [_{DP} **tudu** ki éra di koitádu]
 3SG take(PFV) everything that be(PFV) of poor.guy
 y e djunta so pa el.
 and 3SG pick(PFV) only for 3SG
 Lit.: ‘S/He took everything that was of the poor guy and s/he collected it.’
 (Brüser & Santos, 2002: 38)

⁵ EP (and English, for instance) also exhibits this possibility, which is a clear difference between restrictive relative clauses and appositives, as in (i).

(i) [_{DP} **Os** que escreveram] são meus amigos. EP
 DEM that write(PFV) be POSS.1PL friends
 ‘Those who wrote are my friends.’
 (adapted from Brito & Duarte, 2003: 669)

- (9) E ka konprende [DP **náda** ki bu fla-l].
 s/he NEG understand(PFV) nothing that 2SG say(PFV)-3SG
 ‘S/He didn’t understand anything that you said to him.’
 (Brüser & Santos, 2002: 345)
- (10) Si nu konpara kes stória ki sta na kel livru
 if 1PL compare(PFV) DET story that be in DET book
 ku [DP **kes Ø** ki nu ta prizenta na *Un Bes ... Xibinh*],
 with DET that 1PL PFV present in ‘...’
 nu ta nota ma kontiudu é idêntiku.
 1PL PFV note that content be identical.
 ‘If we compare the stories that are in that book with the ones that we present
 here, we see that they are similar.’
 (Lima, 2000: 15)

In the generative literature, relative clauses have been treated as open sentences that function as a predicate, requiring overt movement of a relative Operator from its base position to Spec/CP⁶. As a consequence, relative clause formation is subject to (i) bounding conditions on overt movement, i.e. it is not possible to extract a DP over two bounding nodes (see (11a.), an example of a Complex NP Island violation in European Portuguese, the lexifier language of CVC, and (11b.), an example in English); and to (ii) the Empty Category Principle (ECP), a condition on chains⁷.

Complex NP Island

- (11) a. *A pessoa_i [CP com quem_i tu encontraste
 the person with who 2SG find(PFV)
 [DP alguém [CP OP_i que falaria ~~com a pessoa_i~~]] está doente.
 someone that talk be sick
 b. *The person with whom you found someone that would speak is sick.

⁶ Chomsky (1995b) assumes that the SpecCP of the relative clause is occupied by either an empty Operator or by a wh-element, both raised from a position within the clause. I also refer the reader to Sauvageot (1975), Cinque (1981), Borer (1984), Safir (1986), Blanche-Benveniste (1990), Guasti (1990), Brito (1991), Demirdache (1991), Bruyn (1995b), Prince (1995), Borsley (1997), Sag (1997), Negrão (2000), Platzack (2000), Bianchi (2002b), De Vries (2002), Grosu (2003), Manninen (2003), a.o.

⁷ On several definitions of the ECP within the P&P framework, see section 5.2.2.1. of chapter 5.

In the framework of Derivation by Phase (cf. Chomsky, 2001), relative clause constructions formed by A'-movement involve three operations in the narrow syntax, as in (12).

- (12) a. Merge (the relative operator);
b. Agree (the relative operator with the head noun);
c. Attract (the relative/null operator to Spec/CP, with or without pied-piping).

Nevertheless, an analysis of relativization based on overt A'-movement does not account for relative clauses formed by no (overt) A'-movement, as noted by Chomsky (1995b: 71), according to whom “it would remain to extend the analysis to languages that form relatives with in-situ pronouns (resumptive pronouns) and full NP heads in the position of the variable above.”

In the case of languages that allow for relative clause formation without A'-movement of an operator to Spec/CP (as we will see that CVC does), I will argue that the process involves only Merge/Agree⁸ and that Move (as a composite operation of Agree/Attract) is blocked, leading to resumption.

4.2.1. Relativization with A'-movement

4.2.1.1. The gap strategy

When a DP is relativized in CVC, restrictive relative clauses involve A'-movement of a null Operator to Spec/CP, obligatorily leaving a null copy in the extraction site, the so called (null) gap strategy. As these relative clauses are only introduced by the complementizer *ki* ‘that’, in minimalist terms, the strategy consists of Merge/Agree/Attract without pied-piping.

In the case of DP relativization, the grammatical functions involved are SBJ, DO and OBJ₁ and OBJ₂, of Double Object Constructions, as in (13)-(15).

⁸ Note that Chomsky (2001: 10) says that “the combination of Agree/pied-piping/Merge is the composite operation Move, preempted where possible by the simpler operations Merge and Agree.”

- (13) [DP Kel omi_i ki [DP/SBJ --]_i kebra karu]
 DET man that break(PFV) car
 sa ta papia ku médiku.
 PROGR talk with doctor
 ‘The man that broke the car is talking to the doctor.’
- (14) [DP Kes flor_i ki bu panha [DP/DO --]_i]
 DET flower that 2SG catch(PFV)
 (es) e mutu bunitu.
 3PL be very pretty
 ‘The flowers that you caught are very pretty.’
- (15) a. [DP Mudjér_i k-u pergunta [DP/OBJ1 --]_i ora]
 woman that-2SG ask(PFV) hour
 éra nha tia.
 be POSS.1SG aunt
 Lit.: ‘The woman that you asked the time was my aunt.’
 ‘The woman to whom you asked the time was my aunt.’
 (Mendes *et al.*, 2002: 340)
- b. [DP Kel libru_i ki nu da Djon [DP/OBJ2 --]_i]
 DET book that 1PL give(PFV) Djon
 ganha prémiu literáriu.
 win(PFV) premium literary
 ‘The book that we gave Djon won a literary premium.’

In the case of relativization of nominal complements (with Genitive Case), these are either structurally similar to SBJ relative clauses (*vd.* (16) and see (13)) or the relativized constituent occurs in the form of a possessive pronoun, as in (17).

- (16) a. Anos nu papia ku [DP kes mudjeris_i ki
 1PL 1PL talk(PFV) with DET women that
 [DP/SBJ --]_i tinha ropa xuxu].
 have(IPFV) garment dirty
 Lit.: ‘We talked with the women that had the clothes dirty.’
 Equivalent to: ‘We talked with the women whose clothes were dirty.’
- b. [DP Kes baka_i ki [DP/SBJ --]_i tene bixeru
 DET cow that have(IPFV) calf
 duenti] ta fika na kasa di limaria.
 sick IPFV stay in house of animal
 Lit.: ‘The cows that have calves sick they stay in the corral.’
 Equivalent to: ‘The cows whose calves are sick stay inside the corral.’
- (17) [DP Baka_i ki si_i fidju móre]...⁹
 cow that POSS.3SG son die(PFV)
 Lit.: ‘The cow that her son died...’
 ‘The cow whose son died...’
 (Veiga, 2000: 180)

CVC also allows for a null gap strategy analyzed through Merge/Agree/Attract with pied-piping only when the relative clause is introduced by *undi* ‘where’. In this case, the relative operator *undi* moves to Spec/CP, leaving a null copy at the foot of the chain. This strategy occurs only when a PP [+Locative] is relativized, as in (18).

⁹ This is a case of Weak Crossover Effect, showing that the Bijection Principle applies at LF (the coindexing between the head of the relative clause and the relative operator), along the lines of Chomsky (1982), for example.

In what concerns the inner structure of the possessive phrase *si fidju* ‘her/his son’ involved in this sentence, I refer the reader to Miguel (2004), who presents a comprehensive study of this constructions. Basically, Miguel (2004: 315) assumes that the possessor (e.g. *baka* ‘cow’ in the text) is a Gen(itive)P and that it subcategorizes a complement that can occur on the form of a pre-nominal possessive, being interpreted as <agent> or <theme> (e.g. *si* ‘his/her’). Specifically, the author proposes that “the DP containing a possessive is processed as a [GenP] whose higher projection is [AgrP], in which the genitive Case is checked in a [Spec, head] relation with the features of the nominal head or it contains an abstract [Gen°] head” (ibid., my translation).

- (18) [DP Kes [PP loja_i na undi]_i C° N kunpra es ropa-li
 DET store in where 1SG buy(PFV) DEM garment-PROX
 [PP/LOC --]_i es fitxa.
 3PL close(PFV)

‘The stores where I bought these clothes are closed.’

Note two facts about this strategy of gap with pied-piping: (i) typically, *undi* does not co-occur with an overt complementizer (specifically, *ki* ‘that’ in CVC, see sections 2.3.2.5. and 2.5.1.7. of chap. 2 on this matter), and (ii) the preposition *na* ‘in’ pied-piped with *undi* has the same semantic value as the relative operator, namely, Locative. This behavior may be evidence for assuming that *undi* is losing its semantic value [LOC]. In fact, there are some (rare) cases of relative clauses introduced by *undi* in which this element co-occurs with a spelled out co-referential element¹⁰, as in (19).

- (19) Dja N da pa Fránsa, pa Inglatéra, pa txeu otus país,
 already 1SG give(PFV) to France to England to very other country
 más inda N ka átxa
 but yet 1SG NEG find(PFV)
 [DP un país **undi**_i N pode vive n'[el_i]].
 a country where 1SG can live in-3SG
 Lit.: ‘I already went to France, to England, to many other countries, but I didn’t
 find a country yet where I could live in.’
 (Brüser & Santos, 2002: 109)¹¹

As I stressed in Alexandre (2006: 91), although the sequence *P_{a/para} + onde* ‘P_{to} + where’ is possible in EP, the behavior of CVC contrasts with EP, a language in which the relative operator *onde* is never preceded by the preposition that conveys the same semantic value (*em* ‘in’), as in (20).

¹⁰ I am not deliberately calling spelled out copy or resumptive pronoun to the element that occurs at the foot of the nontrivial chain (*undi_i, el_i*).

¹¹ I must stress that most of the examples taken from Brüser & Santos (2002) are instances of oral speech produced by one of the authors (André dos Reis Santos), who is natural from Santiago inland, particularly, from João Teves dos Órgãos (Santa Cruz district, which is next to Santa Catarina district).

- (20) [DP A terra_i {para/*em} onde_i vais [--]_i]
 the land to where go.2SG
 não tem electricidade.
 NEG have(IPFV) electricity
 ‘The place where you are going to doesn’t have electricity.’

Preposition *em* occurs, instead, in locative relative clauses followed by *que* ‘which’, in complementary distribution with *onde*, as in (21).

- (21) [DP A livraria_i {em que / onde}_i eu comprei estes livros
 the bookshop in that / where 1SG bought these books
 [--]_i] fechou.
 closed
 ‘The bookshop where I bought these books has closed.’

As the next section will show, PP pied-piping is allowed in CVC relative clauses formation only when *undi* is involved, as the output of a Merge/Agree/Attract operation. Merge/Agree/Attract of DPs, without pied-piping (i.e. leaving the preposition in situ), is preferred otherwise.

4.2.1.2. The preposition stranding with a spelled out trace (PSST) strategy

CVC displays another relativization strategy that can be analyzed as involving Merge/Agree/Attract without pied-piping. This occurs when the relativization of a PP is involved and, in this case, a relativization with a gap is not possible: the extraction site of a relativized prepositional complement has to be overtly filled with an invariable pronominal form (3SG). In the literature of these constructions, the overt pronominal form that fills in the foot of a nontrivial wh-chain, where a null gap is expected, has been called ‘spelled out trace’ and this element has been considered the surface image of a preposition stranding with spelled out trace strategy¹² or resumption¹³, as in (22) or (23), cases of a relative clause with a Generic reading.

¹² Alexandre & Hagemeijer (2002) showed that this strategy is available for almost all Portuguese-based Atlantic Creoles (CVC, Kriyol, Santome, Principense and Angolar).

- (22) Djon atxa [DP kes mudjeris_i ki Zé papia ku-**el**_i].
 Djon find(PFV) DET women that Zé talk(PFV) with-3SG
 Lit.: ‘Djon found the women that Zé talked with him.’
 ‘Djon found the women that Zé talked with.’
- (23) Kel omi-la e dodu y e ta fase senpri mesmu kusa:
 DEM man-DIST be crazy and 3SG IPFV do always same thing
 [DP mudjeris_i k’e ta papia ku-**el**_i na Sukupira],
 women that-3SG IPFV talk with-3SG in Sukupira
 e ta pidi(-s) p’es da ku tornu.
 3SG IPFV ask(-3PL) to-3PL give with hip
 Lit.: ‘That man is crazy and he always does the same thing: women that he talks
 with him at Sukupira, he asks them to move their hips.’
 ‘That crazy man always does the same thing: every woman that he talks with at
 Sukupira, he asks them to dance.’

Two facts about this strategy are straightforwardly observed from (22). First, the pronominal form *el* ‘s/he, it’ and the head of the relative clause *kes mudjeris* ‘the women’ do not share the same entire set of ϕ -features, at least the [Number] feature does not agree, being *el* obligatorily an invariable 3SG element¹⁴. Second, *el* occurs at the complement position of the preposition that is left in situ (*ku* ‘with’), corresponding to an overt alternative of the English P-stranding strategy (cf. the translation of (22)).

¹³ Up to my knowledge, the properties of PSST and resumption strategies have not been distinguished yet. In the literature of relative clauses, these strategies are considered to be the same (see Muysken, 1977, Dijkoff, 1983, Demirdache, 1991, Aoun, Choueiri & Hornstein, 2001, Boeckx, 2003a, Asudeh, 2004, McCloskey, 2006, Rouveret, 2008, a.o.)

¹⁴ There are, of course, some disputable examples in which we cannot decide whether they are formed by the PSST or the resumptive strategies because of the singular number information on the head of the relative clause, as *língua* ‘language’ in (i):

(i) Kiriolu é [DP **língua**_i ki e ta identifika si kabésa ku **el**_i].
 Creole be language that 3SG IPFV identify POSS.3SG head with 3SG
 Lit.: ‘Creole is the language that he identifies himself with it.’
 ‘Creole is the language that he [capeverdean] identifies himself with.’
 (Silva, 1998: 120)

I postpone the discussion of [Number] mismatch and the consequent ambiguity between PSST and resumptive strategies to the next chapter, which is almost exclusively concerned with the PSST strategy.

If “one of the central questions in creole studies is whether creoles pattern with their superstrates or with their substrates” (cf. Veenstra & Den Besten, 1995: 304), we should note that this particular strategy is not found in EP, as in (24) – a sentence of colloquial speech, in which examples of resumption freely occur.

- (24) Há [DP técnicos muito bons_i que as pessoas EP
 have(IPFV) technicians very good that the persons
 não sabem o nome **deles/*dele_i**].
 NEG know(IPFV) the name of-3PL/3SG
 Lit.: ‘There are very good technicians that the people do not know the names of them.’
 (adapted from Alexandre, 2000: 56)

In (24) we observe that if the pronoun *eles* ‘them’ agrees in number (PL) and gender (MASC) with the head of the relative clause *técnicos muito bons* ‘very good technicians’ yields a good derivation, while if the foot of the wh-chain is spelled out in the form of a 3SG pronoun the derivation crashes, contrary to what is found in CVC in (22)-(23).

So, the PSST strategy is not available in EP and neither is it available in Wolof. According to Torrence (2005: 150), “relativized items cannot occur with resumptive elements such as clitics. Note also that what corresponds to a stranded preposition in English [as *with* in (25) below] does not do so in Wolof”.

- (25) Caabi j.i ma ubbe-e bunt bi. Wolof
 key CL.i 1SG open-INST door the
 ‘The key that I opened the door with.’
 (Torrence, 2005: 149)

I will present below the overall battery of possibilities available in CVC for the PSST strategy, stressing the fact that *el* is associated with a specific syntactic category and function (namely, PP_{OBL}).

In CVC, the PSST strategy operates only with PP_{OBL} constituents within relative clauses that occur outside syntactic islands, as sentences (26)-(28) show.

- (26) a. Bu Dona djanta ku [DP kes mudjeris;
 POSS.2SG grandmother eat(PFV) with DET women
 ki Zé papia [PP/OBLNuc] ku-[el]_i] na festa].
 that Zé talk(PFV) with-3SG in party
 Lit.: ‘Your grandmother ate with the women that Zé talked with him at the party.’

- b. [DP Sais konsetu operacional_i ki N sa ta bem
 six concept operative that 1SG PROGR come
 trátá [PP/OBLNuc] d[el]_i].
 treat of-3SG

Lit.: ‘Six operative concepts that I have been treating of it.’

‘Six operative concepts that I have been explaining.’

(Silva, 2005: 180)

- (27) E ten [DP un armun pintador_i ki tudu algen
 3SG have(IPFV) a brother painter that every someone
 ta kre trabádja [PP/OBLAccess ku [el]_i].
 IPFV want work with 3SG

Lit.: ‘S/He has a brother that everyone wants to work with him.’

‘S/He has a brother which everyone wants to work with.’

(Brüser & Santos, 2002: 590)

Complex NP Island

- (28) *N odja [DP kes omi_i [CP ki Djon konxe [DP un padri
 1SG see(PFV) DET man that Djon know(IPFV) a priest
 [CP ki ta papia [PP/OBLNuc] ku-[el]_i]]]].
 that IPFV talk with-3SG

Lit.: ‘I saw the men that Djon knows a priest that talks with him.’

When a DP not selected by a preposition is relativized (as SBJ, DO, OBJ₁ or OBJ₂), the derivation crashes if the PSST strategy is used, irrespective of the grammatical function of the complex DP, as in (29)-(31) (cf. also (13)-(15) above).

- (29) a. *[_{DP/SBJ} Kes omi_i ki [_{DP/SBJ} e_l]_i sa ta papia ku
 DET man that 3SG PROGR talk(PFV) with
 médiku] kebra karu.
 doctor break(PFV) car
 Lit.: ‘The men that he is talking with the doctor broke the car.’
- b. *Ami N odja [_{DP/DO} kes mininu_i ki [_{DP/SBJ} e_l]_i
 1SG 1SG see(PFV) DET boy that 3SG
 furta galinha].
 steal(PFV) hen
 Lit.: ‘I, I saw the boys that he stole the chickens.’
- (30) a. *[_{DP/SBJ} Kel mininu_i ki nhos odja-[_{DP/DO} I]_i na sinema]
 DET boy that 2PL see(PFV)-3SG in cinema
 fla ma Maria e menbra di Zé.
 say(PFV) that Maria be girlfriend of Zé
 Lit.: ‘The boy that you saw him at the cinema said that Maria is Zé’s girlfriend.’
- b. *Maria atxa [_{DP/DO} kes mininus_i ki bu odja-[_{DP/DO} I]_i
 Maria find(PFV) DET boys that 2SG see(PFV)-3SG
 na sinema].
 in cinema
 Lit.: ‘Maria found the boys that you saw him at the cinema.’
- (31) a. *[_{DP/SBJ} Kes mininu femia_i ki bu konta-[_{DP/OBJ1} I]_i stória]
 DET boy female that 2SG tell(PFV)-3SG story
 es sta kontenti.
 3PL be happy
 Lit.: ‘The girls that you told him stories, they are happy.’
- b. *Pulísia prende [_{DP/DO} kes omi_i ki bu da-[_{DP/OBJ1} I]_i bixeru].
 Police arrest(PFV) DET man that 2SG give(PFV)-3SG calf
 Lit.: ‘The police arrested the man that you gave him the calves.’

c. *Djon prende [DP/DO kes bixeru_i k'N da-[DP/OBJ2 I]_i Zé].
 Djon tie(PFV) DET calf that-1SG give(PFV)-3SG Zé
 Lit.: 'Djon tied the calves that I gave him to Zé.'

Another property of the PSST strategy involved in relative clause formation in CVC is that it is in complementary distribution with the gap strategy, pied-piping yielding ungrammatical outputs¹⁵, irrespective of the prepositions involved, as in (32)-(33), and preposition stranding with a null gap (i.e. the English type) is not allowed neither, as in (34).

(32) a. *Bu ka konxe [DP kes pisa_i [di kenha]_i N gosta
 2SG NEG know(IPFV) DET person of who 1SG like(IPFV)
 mas txeu [PP/OBLNucl --]_i n-es bida].
 more much in-DEM life
 Lit.: 'You don't know the person of whom I like more in my life.'

b. *Djon ka ta atxa [DP kes faka_i [ku ki]_i nhos ta
 Djon NEG IPFV find DET knife with which 2PL IPFV
 korta porku [PP/OBLAccess --]_i].
 cut pig
 'Djon does not find the knives with which you cut the pigs.'

(33) a. *[DP Kes duensa_i [kontra ki]_i mininu dja dadu
 DET disease against which boy already give(PFV).du
 balsina [PP/OBLAccess --]_i] ta mata txeu algen.
 vaccine IPFV kill very someone
 Lit.: 'The diseases against which the boys were already shot kill lots of people.'

¹⁵ Note that this is not what is found in wh-questions in CVC, in which PSST is an alternative to PP pied-piping. See chap. 3 and especially chap. 5 for further developments.

b. *_{[DP Kel mesa_i [riba di ki]_i Djon po jaru}
 DET table overt of which Djon put(PFV) jar
{[PP/OBL{Access} --]_i] tene pé kebradu.}
 have(IPFV) foot break.du

‘The table overt which Djon put the jar has a broken leg.’

- (34) *Djon atxa _{[DP kes mudjeris_i ki Zé papia ku [--]_i]].}
 Djon find(PFV) DET women that Zé talk(PFV) with
 ‘Djon found the women that Zé talked with.’

It seems that PP pied-piping is a ‘heavy burden’ that some languages cannot easily carry¹⁶. Note that other Creole languages that do not resort to PSST do not also allow for PP pied-piping, as Jamaican Creole. Patrick (2004) proposes that PP pied-piping is not allowed in relative clauses of Jamaican Creole because prepositions are tightly bound to the verb, and that in alternative P-stranding with a null gap is obligatory, as in (35).

¹⁶ For a general (syntactic) theory of pied-piping in interrogatives and relative clauses, see Heck (2004). He claims that the phenomenon behaves quite homogeneously across unrelated languages (e.g. Basque, English, French, Irish, Hungarian, and Tzotzil), which makes it possible to establish some generalizations about it (as the transitivity generalization, the edge generalization, the repair generalization, the generalization on massive pied-piping, and the intervention generalization). Particularly, Heck distinguishes two groups of constructions (group A for restrictive relative clauses and embedded questions, group B for appositive relative clauses and matrix questions) that behave differently with respect to pied-piping. Group A applies pied-piping to a much smaller and restricted extent than group B. According to him, the behavior of group B is accounted for by assuming the operation Agree (as in Chomsky, 2001b), while the facts of group A are explained by saying that the constructions involved do not employ [wh]-feature movement.

I must also refer that Broadwell (2005), within the Optimality Theory applied to Kiche (a Mayan language spoken in Guatemala), claims that there is a widespread distribution of pied-piping with inversion in the wh-questions of Kiche and other Mesoamerican languages, as in (i).

- (i) a. Chuxe´ jäś k´o wi le tz´i? Kiche
 under what exist LOC DET dog
 Lit.: ‘Under what is the dog?’
 ‘What is the dog under?’
 b. Jäs chuxe´ k´o wi le tz´i?
 what under exist LOC DET dog
 Lit.: ‘What under is the dog?’
 ‘What is the dog under?’
 (adapted from Broadwell, 2005: 2-3)

Broadwell (id., p. 10) says that “wh-movement does not normally strand a preposition in Kiche”, but he stresses in footnote 8 (ibid.) that “there is, however, apparent P-stranding in relative clauses”. It would be interesting to know what kind of ‘apparent P-stranding’ he is referring to. Is it PSST or some kind of resumption?

- (35) Mi rispek ar tu [_{DP} di dort_i we Jamaican
 1SG respect 3SG to DET ground that
 shi waak [_{PP} pan [--]_i], Mada.
 3SG walk on mother
 ‘I respect her to the ground that she walks on, Mother.’
 (adapted from Patrick, 2004: 23)

Nevertheless, the PSST strategy in CVC is not the unique alternative to PP pied-piping. In fact, in the relative clauses of CVC, PSST seems to be competing with another strategy, P-chopping, and, especially, with resumption (a superficially similar process, but significantly different from PSST, as next chapter will show), and the speakers tend to swing from one to the other. In the next section, I will present the P-chopping strategy and in section 4.2.2. I will present the resumption strategy.

4.2.1.3. The P-chopping strategy

CVC exhibits a further relative clause formation process that is the result of the Merge/Agree/Attract (without pied-piping) operation – the P-chopping strategy. This strategy consists of deleting (at the phonological component) the preposition that c-commands the relativized constituent¹⁷, leaving a null gap at its complement position, which is extracted by wh-movement, as in (36) and (37).

- [N xinti pena di kes mininu / I felt sorry for the boys.]
- (36) [_{DP} Kes mininu_i k’N xinti pena [_{PP/OBLNucl} ~~di~~
 DET boys that-1SG feel(PFV) sorry
 [--]_i] satadja si ropa moku.
 shred(PFV) POSS.3SG clothe all
 Lit.: ‘The boys that I felt sorry shredded all their clothes.’

¹⁷ I recall that, in the examples, the deleted prepositions are signaled by a double strikethrough.

- (37) El é [DP algem_i ki-m gosta más tcheu
 3SG be someone that-1SG like(IPFV) more much
 [PP/OBLNuc_l ~~de~~ [--]_i] n-es bida].
 in-DEM life

Lit.: 'S/He is the person that I like most in my life.'

(Mendes et al., 2002: 340)

Therefore, P-chopping is an alternative to the PSST relativization strategy, although the maintenance of the preposition followed by a pronominal form seems to be preferred over the deletion of the preposition (at least, according to my informants' judgments).

Considering synchronic EP, again, we observe that the strategy of P-chopping is one of the most productive processes of non-canonical relativization, as in (38).

- (38) Em Portugal, qual é [DP o sítio_i que gosta EP
 in Portugal which be the place that like(IPFV).3SG
 de ir [PP/OBL ~~de~~ [--]_i] quando tem uns dias livres?
 of go when have(IPFV).3SG some days free

Lit.: 'In Portugal, which is the place that you like to go when you have some holidays?'

(adapted from Alexandre, 2000: 207)

For BP, Tarallo (1985: 362) suggested that P-chopping is a more recent process than the resumptive strategy. According to him, P-chopping only shows up in the data of the second half of the 19th century, while resumption is already found in older texts. However, A. Costa (2004) refuted Tarallo's idea, showing that P-chopping is as old as resumption, since it is already found in Portuguese texts of the 15th century, as in (39).

- (39) Em tempo [CP [PP Ø que] era seu tutor Joham Old Portuguese
 in time that was POSS.3SG tutor J.
 afomso all/uernaz seu tióó].

A. A. POSS.3SG uncle

Lit.: 'In the time which was his tutor J.A.A., his uncle.'

(adapted from A. Costa, 2004: 413)

In Alexandre (2000: 153), for contemporary EP, I argued that the P-chopping strategy seems to be more frequent and well accepted than resumption because it is more economic to delete a preposition and to leave a gap at its complement position (i.e. yielding a similar result to the gap strategy of SBJ and DO relativization) than to overtly express the original relativization site with a pronominal form (as in the case of PSST or resumptive strategies).

Furthermore, Duarte (1996: 356) argues for EP that the P-chopping strategy is a way of avoiding the pied-piping in relative clauses and that it is limited to the deletion of prepositions that are Case markers, as *a* ‘to’ and *de* ‘of’¹⁸. In fact, this also seems to be the case in CVC, since my informants do not accept the P-chopping strategy applied to heavy (or semantically full) prepositions, such as *riba di* ‘over of’ in (40).

- (40) *_{[DP Kel mesa_i ki Djon po jaru _{[PP/OBL ~~riba~~ ~~di~~}}
 DET table that Djon put(PFV) jar
 [--]_i] tene pé kebradu.
 have(IPFV) foot break.du
 Lit.: ‘The table that Djon put jar has a broken leg.’

Finally, I consider that this strategy involves wh-movement because it does not yield good derivations in syntactic islands contexts, as shown in (41a.), although the strategy yields good derivations outside islands, as in (41b.).

Nominative Island

- (41) a. *Djon da Maria _{[DP kes fotu_i ki papia}
 Djon give(PFV) Maria DET picture that talk
_{[PP/OBL ~~di~~ [kes-fotu]_i e difisi].}
 be difficult
 ‘*Djon gave Maria the pictures that to talk is difficult.’

¹⁸ According to Koopman (2000: 67), “semantically empty Ps can be case markers”. Gomes (2003, ap. Kewitz, 2004: 12) also refers that the change of *a* > *parala* > \emptyset ‘to > for/to > \emptyset ’ is related with the existence of different strategies to express the Dative Case in BP, which is connected to a reordering of the pronominal paradigm of the language.

b. Djon ka atxa [DP kes fotu_i ki Maria
 Djon NEG find(PFV) DET picture that Maria
 papia [PP/OBL ~~di~~ [--]_i].
 talk(PFV)

Lit.: 'Djon didn't find the pictures that Maria talked.'

The P-chopping in sentence (41) displays, thus, the same behavior as the null gap or the PSSST strategies in what concerns their possibilities of wh-extraction (cf. (42) below and (28) above, respectively).

Complex NP Island

- (42) *[_{DP} Kel omi_i ki N sa ta papia ku
 DET man that 1SG PROGR talk with
 [_{DP} kel mudjer [_{CP} ki [--]_i kebra karu]]]
 DET woman that break(PFV) car
 Lit.: 'The man that I am talking with the woman that broke the car.'

4.2.2. Relativization without A'-movement – Resumption

The resumptive pronoun strategy has received great interest in the past few decades, being usually presented as a non-wh-movement strategy that involves an overt pronoun where a gap (i.e. a syntactic variable) should occur. More recently, the resumptive strategy has been viewed as a kind of doubling¹⁹, extremely widespread in non-standard languages, and it has been accepted that Move operates in this strategy.

Resumption can also be understood as a mechanism of 'last resort'²⁰, but it should not be taken as a process of (exclusively) oral and/or informal speech. In CVC,

¹⁹ Alber (2006), within the framework of Optimality Theory, presents an interesting understanding of resumption. According to her, doubling (or resumption) is found extensively in dialect systems and much less so in standard languages, because "standard languages are, to a large extent, sometimes exclusively, used as written languages, whereas dialects are almost always used orally. Processing a complex sentence is arguably more difficult in oral than in written parsing, hence the predominance of structures facilitating processing in dialect systems".

See also Boeckx (2003a), Merchant (2004), Alber (2006), Poletto (2006), Van Craenenbroeck & Koppen (2008), a.o. for the doubling character of resumptive structures.

²⁰ Note that I am not using the term as in 'Last Resort principle' (see Shlonsky, 1992 or Chomsky, 1995b, according to whom this economy principle is defined as in (i)).

Last Resort

(i) "Move F raises F to target K only if F enters into a checking relation with a sublabel of K".

(43) a. [_{DP} Kes mudjeris_i ki nu papia [_{PP/OBLNucI} ku-[**es/el**]_i]]
 DET.PL women that 1PL talk(PFV) with-3PL/3SG
 es bai parti.
 3PL go(PFV) leave
 Lit.: ‘The women that we have talked with them, they went away.’
 ‘The women that we talked with went away.’

b. _{[DP} Kes mos_i ki Maria gusta [_{PP/OBLNuc}l d-**[es/el]**_i]]
DET.PL boy that Maria like(IPFV) of-3PL/3SG
es kebra pé.
3PL break(PFV) foot
Lit.: ‘The boys that Maria likes them, they broke their feet.’
‘The boys that Maria likes broke their feet.’

c. _{[DP} Kes nobidad_i ki nu ka staba purparadu
DET news that-1PL NEG be(IPFV).ba prepare.du
{[PP/OBL{Access}} pa es_i]] dexe-nu duenti.
for 3PL 1 leave-1PL sick
Lit.: ‘The news that we were not ready for them put us sick.’
‘The news that we were not ready for put us sick.’

(Chomsky, 1995b: 280)

‘My father wrote a letter to the women that Zé talked to.’

b. Nha pai skrebe karta pa [DP kes mudjeris ki Zé
 POSS.1SG father write(PFV) letter to DET women that Zé
 papia ku-[es]].
 talk(PFV) with-3PL

Lit.: ‘My father wrote a letter to the women that Zé talked with them.’

Some other (unrelated) Creole languages also display this rejection to PP pied-piping, resorting instead to a, usually called, resumptive strategy. Muysken (1977) and Dijkhoff (1983) recorded cases of resumption in Papiamentu, as in (45).

(45) [DP E sen_i ku mi ta warda Papiamentu
 the money that 1SG PROGR wait
 [PP/OBL riba dj[é]_i]] ...
 on-3SG

Lit.: ‘The money that I am waiting for it.’

(adapted from Muysken, 1977: 86)

Christie (1996) and Patrick (2004), for Jamaican Creole (an English-based Creole language), claim that pied-piping is not allowed in this language. Instead, preposition stranding with a null gap (in (35) above) and resumption, in (46), are allowed.

(46) [DP Di uman_i we dem tiif ar_i biebi] Jamaican
 DET woman that 3PL steal POSS.3SG baby
 gaan a stieshan.
 go(PFV) DET station

Lit.: ‘The woman that they stole her baby has gone to the station.’

(Christie, 1996: 58)

DeGraff (2007), for Haitian Creole, and Alleesaib (2007), for Mauritian Creole (both French-based Creole languages), reported that the formation of relative clauses involves, typically, a resumptive strategy as an alternative to pied-piping (cf. (47) and (48), respectively).

- (47) Demokrasi bay pèp [_{DP} la presidani Haitian
 democracy give(PFV) people DET president
 yo te vote [_{PP/OBL} pou li a]].
 3SG PFV vote for 3SG DET
 ‘Democracy gave the people the president they had voted for.’
 (adapted from DeGraff, 2007: 111)

- (48) a. [_{DP} Sa aktrisi (ki) Devi abij parej Mauritian²¹
 DEM actress that D. dress same
 [_{PP/OBL} kuma *(li)i la]] apel Malika.
 like 3SG DET name M.
 Lit.: ‘The actress that Devi dresses like her is named Malika’.

- b. * [_{DP} Sa aktrisi kuma ki Devi abij parej la] apel Malika.
 ‘The actress like whom Devi dresses is named Malika.’
 (adapted from Alleesaib, 2007)

I will also assume the classical perspective of resumption (vd. the discussion on this topic in the next chapter, section 5.2.5.), according to which it involves no A'-movement and the relative clause interpretation is done by Merge of the DP head of the relative clause (with a null D°) in Spec/CP, an analysis of Merge/Agree (without

²¹ According to Alleesaib (2007), it seems that Mauritian Creole exhibits different processes to relativize PPs, depending on the prepositions involved. For instance, the preposition *lor* ‘on’ allows for pied-piping or resumption, as in (i) and (ii).

- (i) [_{DP} Sa sizei [_{CP} **lor** *(ki)i Minta pe travaj ~~lor~~ ki la]] pe fatig li. Mauritian
 DEM topic on that M. PROGR work DET PROGR tire 3SG
 ‘The topic on which Minta is working wearies her.’
- (ii) [_{DP} Sa sizei [_{CP} (ki) Minta pe travaj **lor** lai la]] pe fatig li.
 DEM topic that M. PROGR tire on LOC DET PROGR tire 3SG
 Lit.: ‘Among the topics, the one that Minta is working on it wearies her.’
 (adapted from Alleesaib, 2007)

Although Alleesaib (id.) argues that the difference of using pied-piping or resumption is the result of distinct interpretations, we must note that this fact also seems to be connected to the occurrence of different elements in the C° domain. Namely, in (i), the pied-piping strategy does not allow *ki*’s deletion, while (ii), the resumptive alternative, may involve a deleted *ki*. We may hypothesize that in (i) a relative pronoun is involved while in (ii) a complementizer introduces the relative clause, and that the choice on distinct strategies is the consequence of the occurrence of these elements.

Attract). At the foot of a Binding chain, we find a pronominal form whose set of ϕ -features (specifically, number) perfectly match those of the head noun.

The test usually employed to show that this strategy does not involve Move is the extraction out of syntactic islands, showing its insensitiveness to these environments, as (49) illustrates.

Complex NP Island

- (49) [DP Kes artista_i ki N odja [DP kel omi ki ka
 DET artist that 1SG see(PFV) DET man that NEG
 gusta d'[es]_i] ta toka na bar di Djon.
 like(IPFV) of.3PL IPFV play in bar of Djon.
 Lit.: 'The artists that I saw the man that doesn't like them play at Djon's bar.'

Some scholars claim that it is not necessarily true that resumptive pronouns never exhibit syntactic island effects. For instance, Goldsmith (1981) argues that in Igbo (a language spoken in Nigeria), resumptive pronouns, like (null) gaps, are sensitive to syntactic islands, as in (50).

Complex NP Island

- (50) a. *Nke-a bụ uno m maalu nwoke lulu (ya). Igbo
 this is house I know man built (it)
 'This is the house that I know the man who built it.'
- b. *Nke-a bụ uno m maalu onye lulu (ya).
 this is house I know who built (it)
 'This is the house that I know who built it.'
- (Goldsmith, 1981: 379)

Observe further that Igbo also exhibits wh-questions obligatorily formed by a PSST (or resumptive) strategy (cf. (51)). We cannot decide which strategy is really applied since I could not find a sample of Igbo involving plural head nouns.

- (51) Onye ka fa kwulu maka *(ya)? Igbo
 who ka 3PL talk(PFV) about him

Lit.: ‘Who did they talk about him?’

(adapted from Goldsmith, 1981: 380)

Nevertheless, sentence (50) shows that languages like Igbo must have only the PSST strategy, while CVC exhibits two clearly distinct strategies: PSST and resumption (cf. chap. 5 for further developments on this matter).

Furthermore, Alleesaib (2007) explains the alternation between pied-piping and resumption in Mauritian Creole (see fn. 22 above) by saying that they are the output of different interpretations possibilities. According to her, in Mauritian Creole, the referents of the resumptive pronouns have to be [+ specific], their antecedents receive obligatory wide scope readings, and they do not allow negative quantified antecedents, as in (52).

- (52) a. *Pa ena [DP person_i [CP (ki) to kav fer **li**_i konfjans]]. Mauritian
NEG have nobody that 2SG can do 3SG trust

b. Pa ena [DP person_i [CP (ki) to kav fer ~~person_i~~ konfjans]].

Lit. ‘There is nobody you can trust.’

(adapted from Alleesaib, 2007)

Shlonsky (1992) has reported the same contrast between gaps and resumptive pronouns for Hebrew, as in (53).

- (53) *Rina lo [?]ahava [DP af bašani [CP še-Dalya hikira Hebrew
Rina not loved no linguist that-Dalya knew
[?]et ha-[?]iša še-**hu**_i pagaš]].
ACC the-woman that-3SG met

‘Rina did not love any linguist_i that-Dalya knew the woman that he_i met.’

(adapted from Shlonsky, 1992: 448, fn.3)

In CVC, such an alternation between pied-piping and resumption in the formation of relative clauses is the found, i.e. the language does not exhibit the behavior of Mauritian Creole or Hebrew.

4.3. The structure of restrictive relative clauses

Since the early sixties, the structure of headed relative clauses has been presented and modified according to the theoretical developments of the Generative Grammar program (see Bianchi, 2002b, for a thorough state-of-the-art paper on this topic).

The goal of this section is not to review the advantages and disadvantages of all these proposals, but to consider Platzack's (2000) analysis of a relative CP embedded in the complement position of N° and Bianchi's (2002a) raising analysis, in order to decide whether the former or the latter correctly accounts for these constructions in CVC. My main concern is to capture the syntactic relation between the antecedent of the restrictive relative clause (the head) and the relativization site.

4.3.1. The complement-of-N° analysis (Platzack, 2000)

Platzack's (2000) analysis of relative clauses consists of an antisymmetric structure in which a restrictive relative CP is the complement of the 'head' (without raising), i.e. "the nominal head of a restrictive relative is generated in N° (...), taking the relative CP as its complement" (id., p. 271)²², as schematized in (54).

$$(54) \quad [_{DP} D^{\circ} [_{NP} N^{\circ} [_{CP} OP_i \dots t_i]]]$$

The first question that may be asked is how does Platzack's (2000) analysis account for the difference between nominal complement clauses (as (55)) and restrictive relative clauses, given that in both cases a CP is taken to be the complement of N°.

- (55) E [DP ... [N° verdadi] [CP ki txuba nunka ka txobi
be true that rain never NEG rain(PFV)
tantu txeu na Praia]].
so much in Praia

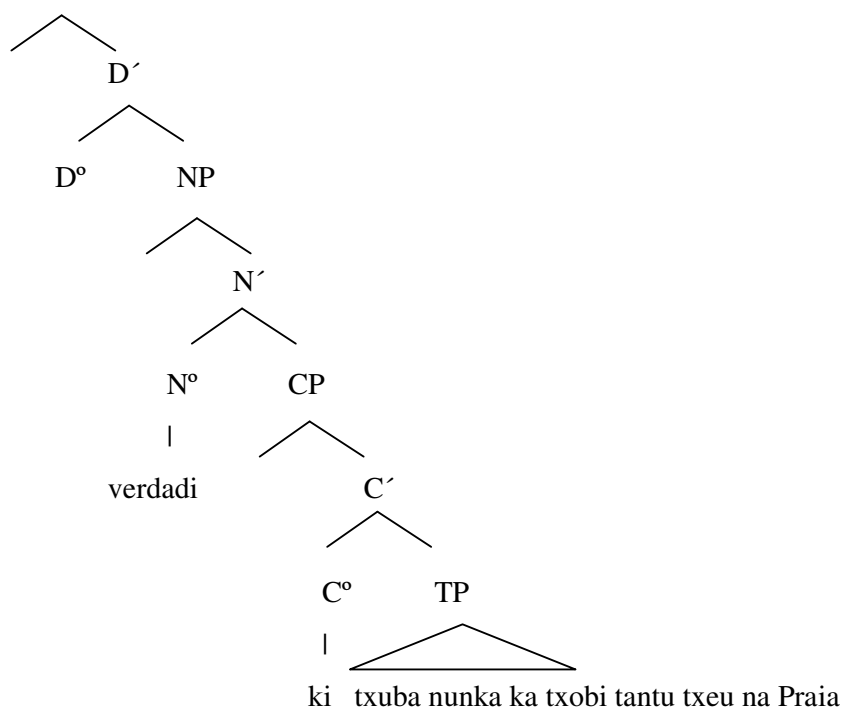
²² For appositive relative clauses, Platzack (2000) proposes a slightly different structure, in which the 'big' DP involves an empty N° whose specifier position is filled by the DP 'head' and it takes the relative CP as its complement (cf. (i)).

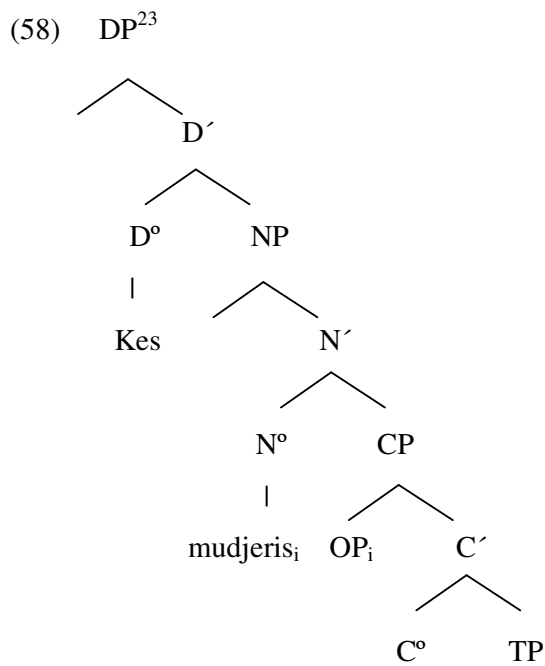
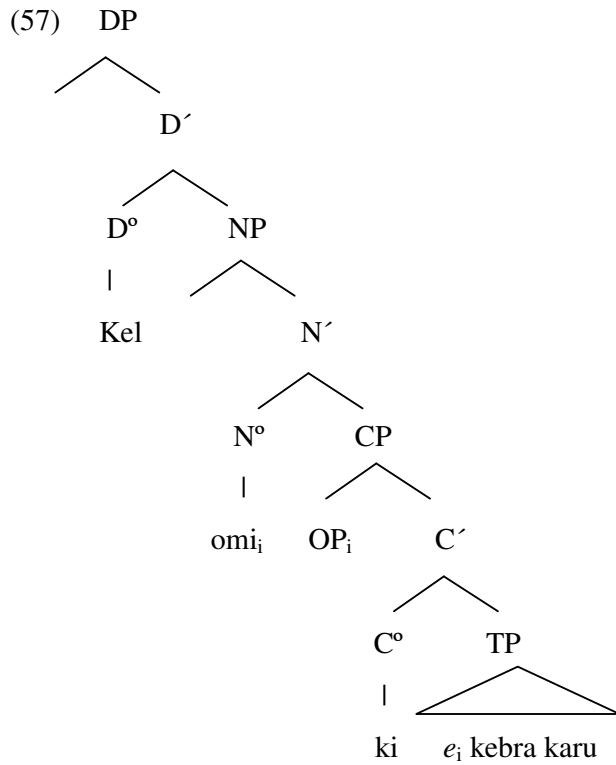
(i) [DP D° [NP DP [N° [CP OP₁ ... t₁]]]].

‘It is true that it never rained so much in Praia.’

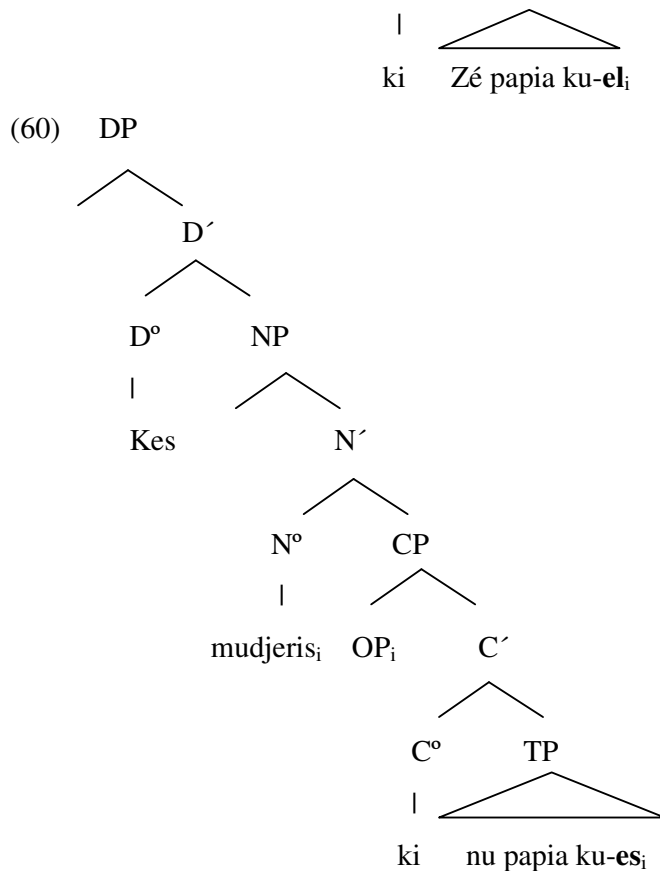
Although apparently the same, a nominal complement clause as *ki txuba nunka ka txobi tantu na Praia* ‘that it never rained so much in Praia’ cannot receive a relative clause interpretation. As I said at the beginning of section 4.2., relative clauses are open sentences that involve a (wh-)operator at SpecCP (see also fn. 7 above). Therefore, nominal complement clauses and relative clauses may be structurally embedded in the same N° complement position, being still semantically distinct. Let us see how Platzack’s analysis works with these sentences. The structure of (55) would be depicted as in (56). Sentences (13), (22) and (42), for a gap, a PSST and a resumptive relative, would be represented as in (57)-(59), respectively.

(56) DP





²³ At this point, I will not discuss how the noun *mudjeris* becomes *el* in the course of the derivation. In chap. 5, which is dedicated to the detailed analysis of the PSST strategy in both wh-questions and relative clauses, I will argue for a mechanism of defective copying that accounts for this particular wh-strategy (see, specifically, section 5.2.5.2.).



Note that, under this account, it is the absence vs. presence of an operator that distinguishes both kinds of sentences. But the structural lack of contrast between argument and non-argument CPs subsists.

Using Platzack's complement-of- N° analysis, how can we account for (i) the distinction between (56), a nominal complement clause, and (57), a restrictive relative clause; and especially to my interests in this dissertation, (ii) how can we set apart structures derived by the PSST strategy, as in (58) and those that are the output of resumption, as in (59), given that both have a null Operator in SpecCP that c-commands and binds the pronoun spelled out at the foot of the wh-chain?

We could further assume that the complementizer that introduces each sentence plays a significant role here. Recalling the proposal made in chap. 2 (cf. table 6), the complementizer *ki* that introduces nominal complement clauses is underspecified for the formal feature $[V: \pm]$ and is $[-Wh]$, while the complementizer *ki* of relative clauses is $[-V, +Wh]$. Besides, nominal complement clauses can also be introduced by complementizer *di* 'of' (contrary to relative clauses; contrast (60a.) with (60b.)), which

is a [-V] complementizer, like the relative *ki*, but underspecified for [T: ±] (a fact that explains the dependency of the tense of the embedded domain on the matrix tense).

- (60) a. [_{DP} Kel ipotizi [_{CP} **di** mininus bai Lisbua di avion]]
 DET hypothesis of boys go Lisbon of airplane
 sa ta da-l grandi ligria.
 PROGR give-3SG big happiness
 ‘The hypothesis that the boys go to Lisbon by airplane is making him/her very happy.’
- b. *[_{DP} Kel ipotizi [_{CP} **di** ki Djon diskuti na almusu]]
 DET hypothesis of that Djon discuss(PFV) in lunch
 e ka pusibi.
 be NEG possible
 Lit.: ‘*The hypothesis of that Djon discussed at lunch is not possible.’

This difference on the value of the formal features of the complementizers is not sufficient to set apart nominal complement clauses and restrictive relative clauses, though²⁴. The problem of nominal selection is still unsolved. Thus, irrespective of how appealing Platzack’s analysis seems, I intend to find another way of accounting for the structure of relative clauses.

4.3.2. The [_{DP} D° CP] analysis (Bianchi, 1999/2002a)

Capitalizing on the fact that the gap and the resumptive strategies of relativization are ‘normal’ processes that alternate in some languages, Bianchi (1999/2002a) argues that this possibility is due to the type of relative clause involved. To account for the resumptive strategy, she assumes a version of the raising analysis inspired in Kayne (1994)²⁵, as presented in (62) for an English *that*-relative like the one in (61).

²⁴ See Lobo (2003: chap. 2) for some tests on the nature of argument vs. adjunct clauses.

²⁵ Borsley (1996) and Alexandre (2000: chap. 4) discussed Kayne’s (1994) approach of the structure of relative clauses. Both authors agree in finding that Kayne’s analysis needs several additional mechanisms in order to obtain empirical adequacy.

(61) The book that I bought yesterday.

(62) [_{DP} the [_{CP} [_{DP} D° book]_i [that I bought [_{DP} D° ~~book~~]_i yesterday]]]

(adapted from Bianchi, 1999: 85)

In Bianchi's (1999/2002a) analysis, "the only operator is the external D°; the relative "head" contains an indefinite relative D° (null in [62]) which does not bind the open position of its NP complement. The latter is instead bound by the external D°" (id., p. 85). She assumes, thus, that the relative (null) determiner has no quantificational force of its own and that it introduces the variable, while the NP complement restricts its range.

The A'-chain obtained can be modified in two possible ways: (i) deleting all the chain links except for the lowest one. In this case, the lowest copy (in the position it is merged in) is no longer c-commanded by a higher copy and it is visible at the LF component (it is 'shrunked' in Bianchi's terms). According to Bianchi (id., p. 85), this yields a 'nonspecific chain' (i.e. the head receives a nonspecific interpretation); (ii) not applying the operation Delete, which yields a 'specific LF chain' (i.e. the head receives a specific interpretation in SpecCP). In this case, the lower copies are maintained but they are not 'shrunked', thus not seen by LF component²⁶. Bianchi (1999/2002a) assumes that the spelling out of a chain link is associated with the structural position it occupies and proposes the PF constraint in (63) (related to the definition of 'interpretable position' in (64)).

PF constraint

(63) "Only a chain link in an interpretable position may be spelled out".

Interpretable position

(64) "An interpretable position is

(i) an operator position

(ii) an A'-bound A position

(iii) the Spec of a [+F] head, F an interpretable feature".

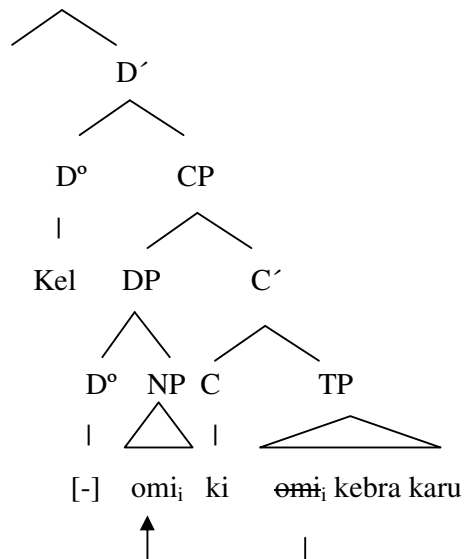
²⁶ Nevertheless, Bianchi (2002a: 96) assumes that "the spell-out of obligatory resumptive pronouns [as the ones found in CVC] is insensitive to the nature of the LF chain".

(Bianchi, 1999: 95)

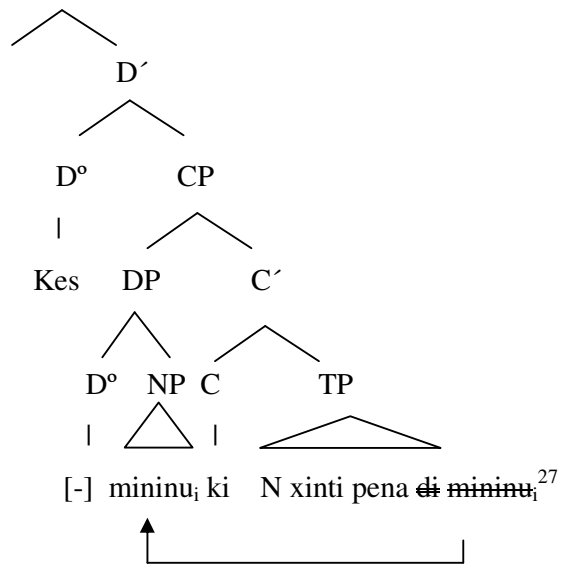
Furthermore, considering resumptive pronouns that rescue islands violations, Bianchi (id., p. 96) claims that the head and the resumptive pronoun at the foot of a (wh-)chain cannot be identified as distinct occurrences of the same syntactic element, although they share the same referential index. To achieve this, Bianchi proposes that the internal structure of the resumptive pronoun is deleted, not needing to be licensed, i.e. it “cannot be interpreted as a variable, but only as a definite anaphoric pronoun”.

Taking again the relativized DPs of sentences (13), (22), (36) and (43), Bianchi’s approach would result in (65)-(68).

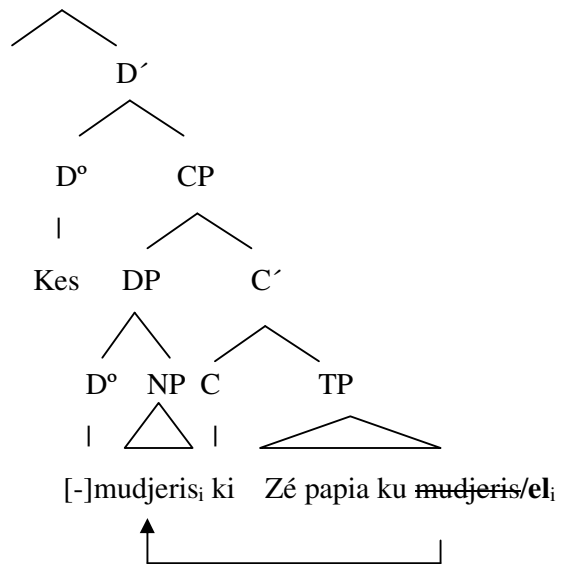
(65) DP



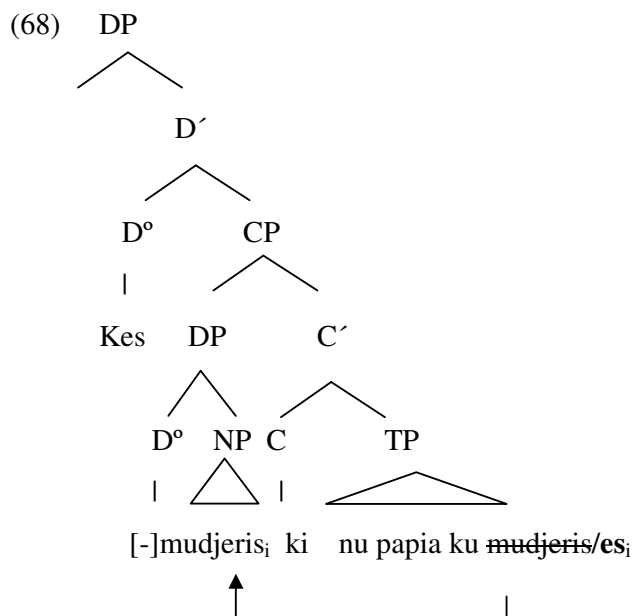
(66) DP



(67) DP



²⁷ Recall that I am using a double strikethrough to signal the deletion of a preposition at PF.



In the spirit of Bianchi's proposal of relative clause structure and PF constraint, the analysis of (67) and (68) goes as follows: the foot of the nontrivial chains in (67) and (68)²⁸ – *el* and *es* – receives a phonological matrix (i.e. is spelled out) because it occupies an interpretable position, namely, an argument position A'-bound by the DP *mudjeris* in SpecCP. For Bianchi, *el* and *es* would be understood, then, as the lexical counterparts of the referential index of the lower copy *mudjeris* (which was struck through in (67) and (68)).

I believe that this approach greatly improves Kayne's (1994) proposal for the structure of restrictive relative clauses. However, adopting Bianchi's analysis exactly as it is, we do not account for the differences between the nontrivial chains in (67) and (68), namely, a 'defective chain', as I will argue for in chap. 5, vs. a 'resumptive chain'. Particularly, in the next chapter it will be shown that the chain in (67) involves wh-movement and that *el* prevents the derivation from crashing²⁹, being the spell out of some formal features of the head noun *mudjeris*, while the chain in (68) is not the output of a wh-movement operation and *es* is already present in the initial Numeration.

²⁸ I will not say anything about (65), an instance of the gap strategy, because it corresponds to Bianchi's example in (61), in the text. Note also that Bianchi does not consider cases of PSST and, thus, (67) is my own understanding of her proposal for this type of strategy.

²⁹ I refer the reader to chap. 5, section 5.2.2.2., where it will be argued that CVC rules out preposition incorporation.

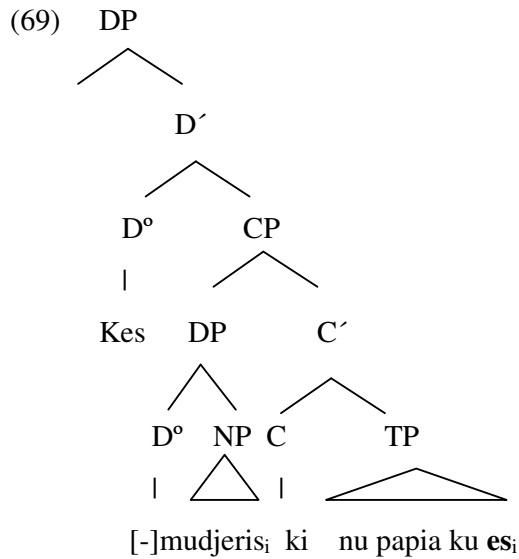
Assuming the distinction between the nontrivial chains that are the output of PSST and resumption, I will follow Bianchi's (1999/2002a) [_{DP} D° CP] proposal³⁰, adjusting it in some specific (and minor) aspects. Namely, when gap and P-chopping relativization strategies are involved, Bianchi's [_{DP} D° CP] approach accounts for them straightforwardly. More specifically, at the beginning of the derivation of a sentence formed by the gap strategy, as *kel omi ki kebra karu* 'the man that broke the car' in (65), the head of the relative is generated / merged inside the CP_{rel}, in its grammatical position (SBJ or OBJ). As the relative CP is headed by the complementizer *ki*, which is specified for the uninterpretable feature [*u*Cat +D]³¹, it scans for a [+D] category with which to Agree. Therefore, the DP containing the head noun *omi* moves up to SpecCP in order to establish there an Agree relation with the complementizer *ki*. The P-chopping strategy of a sentence like *kes mininu ki N xinti pena* 'the boys that we felt sorry' in (66) proceeds in a similar way, with the following differences: the head noun *mininu* is selected by the preposition *di* 'of' and, given the fact that the relative complementizer *ki* does not probe for a [+P] feature but for a [+D] one, the DP *mininu* moves up to SpecCP and the preposition *di* is left stranded. However, since the language does not exhibit preposition incorporation, the preposition is deleted in PF in order to prevent the derivation from crashing.

Similarly to P-chopping, the PSST strategy that derives sentences like *kes mudjeris ki Zé papia ku-el* 'the women that Zé talked with him' in (67) involves the spelling out of the formal feature [*u*Cat +D]. More specifically, the head noun *mudjeris* is attracted to SpecCP, to check there the [*u*Cat +D] feature of the complementizer *ki* through Spec-head agreement. However, since the language does not exhibit preposition incorporation and the preposition *ku* is not deleted in PF, one of the formal features of the lower copy survives at PF (namely, the [*u*Cat +D] feature), receiving a phonological matrix correspondent to *el* (the form of an invariable 3rd person pronoun). I will clarify this process of economy in detail in the next chapter claiming that it is the output of a 'defective copying' mechanism. For the time being, just note that it is very similar to Bianchi's 'shrinking' process.

Nevertheless, whenever resumption is at stake, as in (68), I suggest the derivation represented in (69).

³⁰ Bianchi's (1999/2002a) proposal for relative clause structure has the advantages of preserving the virtues of Kayne's (1994) approach, because it is antisymmetric and it raises the DP containing the head.

³¹ I am assuming Pesetsky & Torrego's (2004b) proposal. See chap. 5 of this dissertation for further developments on this topic.



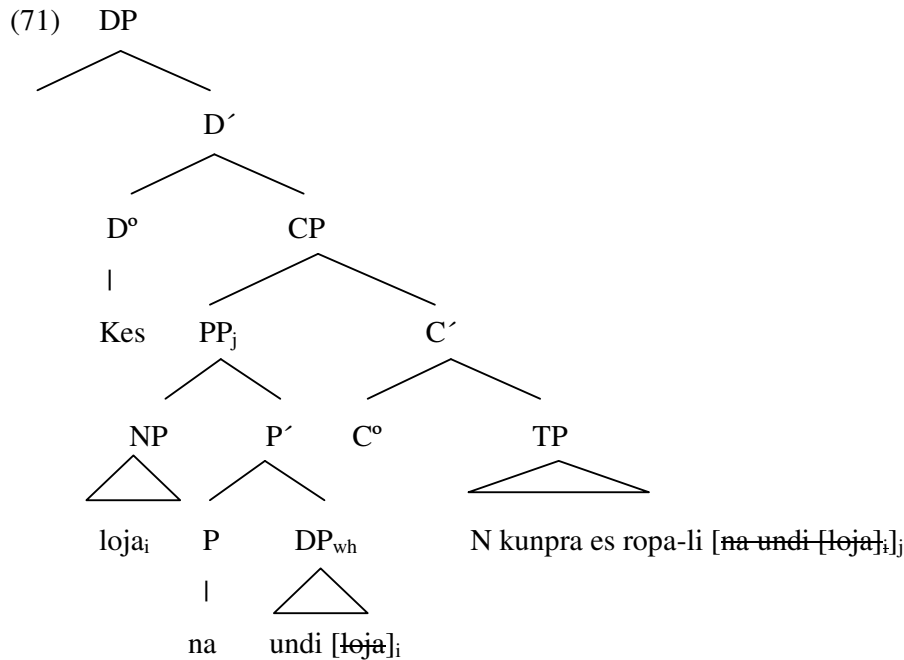
The main difference between (67) and (68) above is the fact that in (68) the nontrivial chain (*mudjeris_i*, *es_i*) is a Binding chain and not a wh-movement chain. Contra Bianchi (1999/2002a), who proposes that “resumptive pronouns are not independent lexical items in the initial numeration, but they are the spell-out of a certain type of referential index on the tail’s chain” (id., p. 91), I will argue in chap. 5 (section 5.3.1.) that *es*, is part of the initial Numeration and is a category distinct from the head of the relative clause.

The ‘head’ of the (restrictive) relative clause – the DP *mudjeris* – is instead merged in the SpecCP position, in order to value the complementizer *ki* formal feature [*uCat* +D]. At this position, the DP *mudjeris* checks the [*uCat* +D] feature of the complementizer *ki*, and the referentiality of the resumptive pronoun *es* is restricted by the head noun of the relative clause, receiving both the same referential index and yielding an A’-binding chain.

Finally, Kayne’s (1994) analysis of relative clauses introduced by relative pronouns also accounts for CVC relative clauses introduced by *undi* ‘where’ and derived by a PP pied-piping strategy, as (18) repeated here as (70) and represented in (71).

- (70) [_{DP} Kes loja_i [_{CP} [_{PP} na undi]_i C° N kunpra es ropa-li
 DET store in where 1SG buy(PFV) DEM garment-PROX
 [_{PP/LOC} na-undi]_i] es fitxa.
 3PL close(PFV)

‘The stores where I bought these clothes are closed.’



Recall that PP pied-piping (+ null gap) in CVC is restricted to the presence of the wh-word *undi* introducing the relative clause and that is connected to the absence of an overt complementizer *ki* too³². Thus, assuming Kayne's (1994: 89) suggestion that "the relative pronouns originate as determiners that are split off from their associated NP by movement of the latter", the derivation of sentence (70) proceeds by moving to SpecCP the PP *na undi loja*, checking there the [+Wh] feature of C°, and then the NP *loja* moves up to SpecPP through the SpecDP_{wh} of *undi*, in order to check the [Number] feature, through a Spec-head relation, assigned by the external D° *kes*, yielding the linear order *kes loja na undi ...* 'the stores where'.

As such, Kayne's (1994) analysis of relative clauses accounts for the constructions derived by the PP pied-piping (+ null gap) strategy, while Bianchi's [_{DP} D° CP] approach has the advantage of correctly accounting for relative clauses that are the output of a Merge/Agree/Attract operation (namely, gap, PSST and P-chopping) but not those formed only by Merge/Agree (i.e. resumption).

³² We have seen in chap. 2 (section 2.3.2.5.) that some native speakers accept the co-occurrence of *undi* and the complementizer *ki*. In these cases, I claim that there are two different complementizers *ki* in CVC: a complementizer *ki* [+D] that only attracts DP, excluding PP pied-piping; and complementizer *ki* underspecified for the categorial feature [D], which allows for PP pied-piping.

4.4. Summary

In this chapter we have seen that CVC is a language that allows for several types of relative clause formation. Some of them involve wh-movement (e.g. gap, PP pied-piping, PSST and P-chopping), while resumption is the output of a non wh-movement strategy.

At first glance, it seems that each of these strategies is specialized in some grammatical function (i.e. SBJ, OBJ, OBL), but three of them occur alternatively, namely, PSST, P-chopping and resumption, showing how ‘rich’ the language is.

The data on restrictive relative clauses of CVC presented in this chapter also lead us to the following empirical generalization, on the path of Cinque (1981) and Bianchi (1999/2002a)³³:

- (73) In CVC, the relativization process seems to block or cancel Attract of prepositional overt material (i.e. PSST, P-chopping and resumption function as an escaping gate from pied-piping).

Table 1. is now updated into table 2., highlighting the categorial nature and the grammatical function of the relativized element.

Table 2. *Relativization strategies, relative markers / complementizers and the categorial nature of the relativized constituent*

Relativization strategies			Relative markers / complementizers	Grammatical functions	Category
With A'-movement	With pied-piping	PP + null gap	(Na) undi	OBL	PP
	Without pied-piping	DP + null gap	Ki	SBJ OBJ	DP
		PSST	Ki	OBL	PP
		P-chopping	Ki	OBL	PP
Without A'-movement	Resumption		Ki	OBL	PP

³³ Bianchi (id.: 79), also after Cinque (1981), says that it is not the NP Accessibility Hierarchy that is at stake, but the “crucial factor is DP vs. PP relativization”.

Finally, in the last section of this chapter, I considered two approaches to the structure of the relative clauses – Platzack's (2000) and Bianchi's (1999/2002a), aiming to decide which one would account better for these constructions in CVC.

Platzack's (2000) analysis of a relative CP embedded in the complement position of N^0 proved not to be able to distinguish between nominal complement clauses and restrictive relative clauses. Although restrictive relative clauses involve an empty operator that is not present in nominal complement clauses, the lack of contrast between argument and non-argument CPs subsists in Platzack's (2000) approach.

Bianchi's (1999/2002a) raising analysis, instead, proved to correctly account for the CVC gap and PSST strategies in restrictive relative clause formation, since the head of the relative clause is a DP, whose D^0 is deleted, that moves up to SpecCP leaving at the extraction site a variable, which is bounded by the external D^0 . However, this approach could not predict the difference between PSST and resumptive relative clauses. In order to accommodate for this distinction, I suggested that an A'-chain as $(mudjeris_i, es_i)$, resulting from resumption, is a binding chain and not a wh-movement one. Contrary to Bianchi (1999/2002a), I assume that resumptive pronouns are part of the initial Numeration as autonomous categories and not the spelling out of certain referential index on the foot of the chain. This will be further discussed in chapter 5.

5. Extensions of the Copy Theory of Movement

5.1. Introduction

The main goal of this chapter is to account for the PSST strategy in wh-questions and restrictive relative clauses of CVC, distinguishing it from resumption. In order to achieve this goal, first, I will review some general properties of wh-questions; second, in section 5.2., I will discuss the specific properties of the PSST strategy in wh-questions; in sections 5.2.3., 5.2.4. and 5.2.5.1., I will evaluate the ability of the Copy (+ Merge) Theory of Movement (Chomsky, 1995b and Nunes, 2004) and of the stranding analysis of resumption (Boeckx, 2003a) to account for PSST in CVC; in section 5.2.5.2., I will suggest a mechanism of accounting for PSST: ‘defective copying’; and, in section 5.3., I will discuss the properties of resumption in wh-questions and restrictive relative clauses of CVC, focusing on the fact that resumption is different from PSST.

In chapter 3 it was shown that wh-questions of CVC may involve one of the three kinds of discontinuous objects informally presented in (1):

- (1) a. [wh ... Ø], resulting from the (null) gap strategy and P-chopping;
- b. [wh_[+PL] ... el], formed by a ‘pronominal’ strategy;
- c. [wh_[+PL] ... es], the output of a resumptive strategy.

For the sake of the exposition, I will recover some of the sentences already presented in chapter 3, for wh-questions, and chapter 4., for restrictive relative clauses, focusing now in what is relevant for the proposal I want to make. Thus, (2) and (3) illustrate the chain (1a.), the strategy available in CVC for Subject and Object wh-questions. This process operates in the same way as in EP or in English, and therefore I will not explore its mechanisms.

- (2) N ka sabe [DP/SBJ ki mudjeris]_i ki [~~ki mudjeris~~]_i fase
 1SG NEG know(IPFV) which women that do(PFV)
 kel katxupa sabi (li).
 DEM katxupa good PROX
 ‘I don’t know which women did this nice katxupa.’
- (3) [DP/DO Ki librus]_i ki Djon kunpra [~~ki librus~~]_i?
 which books that Djon buy(PFV)
 ‘Which books did John buy?’

Sentences (4)-(6) show the contexts where the chain [wh_[+PL] ... es] in (1c.) obligatorily occurs namely in syntactic islands. Let me also stress here the occurrence of a 3PL pronoun in the tail of this discontinuous object associated to a [+PL] head. This, again, is a strategy found in languages like non-standard EP or English (cf. (7a. and b.), respectively).

Nominative Island

- (4) [Ki librus]_i ki [CP papia d’[es/*el]_i] é difisi?
 which books that talk of.3PL/3SG be difficult
 Lit.: ‘Which books is that to talk about them is difficult?’
 ‘Which books is it difficult to talk about?’

Complex NP Island

- (5) [Ki mudjeris]_i ki dja bu atxa
 which women that already 2SG find(PFV)
 [DP un omi [CP ki papia ku-[es/*el]_i]]?
 a man that talk(PFV) with-3PL/3SG
 Lit.: ‘Which women is that you found a man that talked with them?’
 ‘Which women did you find a man that talked to?’

Adjunct Island

- (6) [Ki amigus]_i ki bu bai Fransa ku Maria
 which friends that 2SG go(PFV) France with Maria
 [CP sen papia ku-[es/*el]_i]?
 without talk with-3PL/3SG
 Lit.: ‘Which friends is that you went to France with Maria without talking with them?’
 ‘Which friends did you go to France with Maria without talking to?’

Complex NP Islands

- (7) a. [Que crianças]_i é que tu encontraste
 which children be that 2SG find(PFV)
 [DP alguém [CP que brincaria com [elas]_i]]?
 someone that play(COND) with 3PL
 Lit.: ‘Which children is that you found someone that would play with them?’
 ‘Which children did you find someone who would play with them?’
- b. [Which road]_i didn’t John meet [DP the man [CP who knows [CP where [it]_i leads]]]?

Considering now the ‘pronominal’ strategy [wh_[+PL] ... el] in (1b.), illustrated for CVC with sentences (8)-(14) below, we observe that the language allows for a nontrivial chain headed by a wh-element and with a 3SG pronoun at the foot position. Note also that this chain [wh_[+PL] ... el] is found in good derivations with wh-elements of all oblique grammatical functions, be it matrix or embedded (cf. (8) and (9)), and irrespective of the preposition that precedes *el* ‘s/he’ (e.g. *di* ‘of’ in (10), *ku* ‘with’ in (8), (9), (11) and (13), and *na* ‘in’ in (12) and (14)¹).

¹ The focus here is on monosyllabic prepositions, but the same effects would obtain if ‘complex’ prepositions were involved, as in (i)-(iii), and see also section 3.2.4. of chap. 3 above:

- (i) [Ki floris]_i ki bu kai [PP **riba** d’[el]_i]?
 which flowers that 2SG fall(PFV) over of.3SG
 Lit.: ‘Which flowers is that you fell over it?’
 ‘Which flowers did you fall over?’
- (ii) [Tarafal ta fika lonji di Somada ku Praia / Tarrafal is far from Assomada and Praia].
 [Ki sidadis]_i ki Tarafal ta fika [PP **lonji** d’[el]_i]?
 which cities that Tarafal IPFV stay far of.3SG
 Lit.: ‘Which cities is that Tarafal is far from it?’

- (8) [DP Kenha]_i ki bu sa ta papia [PP/OBLNuc1 ku-[el/*es]_i]?
 who that 2SG PROGR talk with-3SG/3PL
 Lit.: ‘Who is that you are talking with him?’
 ‘Who are you talking to?’
- (9) Bu ka sabe [DP kenha]_i ki bu sa ta
 2SG NEG know(IPFV) who that 2SG PROGR
 papia [PP/OBLNuc1 ku-[el/*es]_i]?
 talk with-3SG/3PL
 Lit.: ‘You don’t know who are you talking with him?’
 ‘Don’t you know who you are talking to?’
- (10) [DP Kas di kes bu subrinhu]_i ki bu gosta
 which.PL of DET.PL POSS.2SG nephew that 2SG like(IPFV)
 [PP/OBLNuc1 d’[el/*es]_i] más txeu?
 of.3SG/3PL much more
 Lit.: ‘Which ones among your nephews is that you like him more?’
 ‘Which nephews do you like more?’
- (11) [DP Ki mininas]_i ki bu papia [PP/OBLNuc1 ku-[el/*es]_i] na festa?
 which girls that 2SG talk(PFV) with-3SG/3PL in party
 Lit.: ‘Which girls is that you talked with him in the party?’
 ‘Which girls did you talk to at the party?’

‘Which cities is Tarafal far from?’

- (iii) [Ki merkadu]_i ki Djon briga ku Maria [pp **frenti** d’[el]_i]?
 which market that Djon fight(PFV) with Maria in-front of.3SG
 Lit.: ‘Which market is that Djon fought with Maria in front of it?’
 ‘In front of which market did Djon fight with Maria?’

We may ask, however, whether these prepositions are [-N, -V] in nature or whether they are nominal forms as in, for instance, Santome Creole (see Hagemeyer, 2007 for a substantial discussion on *bal/be* allomorphs of the verb ‘to go’). I will not discuss this topic, though. For the time being, I will assume that the prepositions above (*riba di* < *riba de* (Old Portuguese) ‘over/on the top of’, *lonji di* < *longe de* ‘far from’, and *frenti di* < *em frente de* ‘in front of’) are crystallized Portuguese forms in CVC.

- (12) [DP Ki kutelu]_i ki bu ta mora [PP/OBLLocNucl n' [el/*es]_i]²
 which hill that 2SG IPFV live in.3SG/3PL
 Lit.: 'Which hill is that you live in it?'
 'Which hill do you live in?'
- (13) [DP Kusé]_i ki bu kebra karu [PP/OBLAccess ku-[el/*es]_i][?]
 thing that 2SG break(PFV) car with-3SG/3PL
 Lit.: 'What is that you broke the car with it?'
 'What did you break the car with?'
- (14) [DP Ki skolas]_i ki Maria ta trabadja [PP/OBLAccess n' [el/*es]_i][?]
 which schools that Maria IPFV work in.3SG/3PL
 Lit.: 'Which schools is that Maria works in it?'
 'Which schools does Maria work in?'

This strategy functions as an alternative to the one in (1a.), which is also available in the case of PP movement (see chap. 3, section 3.2.2.). The pied-piping of a nuclear non-locative oblique PP is possible in the wh-questions of CVC, as in (15) and (16). The pied-piping of PPs leaving a gap in the extraction site is also a common process in EP and English, as (17a. and b.) show, but this last strategy is not central for the discussion carried on here.

- (15) Bu ka sabe [PP ku kenha]_i ki bu sa ta
 2SG NEG know(IPFV) with who that 2SG PROGR
 papia [PP/OBLNucl ~~ku-kenha~~]_i?
 talk
 'You don't know with whom are you talking?'

² In this sentence, the pronoun that occurs after the preposition *na* 'in' has to be 3SG, because the antecedent *kutelu* 'hill' is interpreted as a singular entity, although it may be interpreted as plural, if the necessary conditions meet.

For two different approaches of number agreement in the DP of CVC, see Castro & Pratas (2003) and Alexandre & Soares (2005).

- (16) [PP Di kusé]_i ki bu ka gosta [PP/OBLNucl ~~di kusé~~]_i?
 of thing that 2SG NEG like(IPFV)
 Lit.: ‘Of what don’t you like?’

- (17) a. A quem é que tu não falas? EP
 to who is that 2SG NEG talk
 ‘With whom don’t you speak?’

- b. With whom do we live? English

The syntactic object [wh_[+PL] ... el] seems to behave in a distinct fashion from the other strategies and is fully banned, for instance, from EP or English. I note moreover that, being [wh_[+PL] ... el] the output of a strategy applied to a PP, EP does not allow for Preposition Stranding in any context or dialect (cf. (18a) and (19a))³ and that English only exhibits Preposition Stranding followed by a gap⁴, as the ungrammaticality of sentence (19b) shows.

- (18) a. *[NP Quem]_i é que os meninos ficam [PP **com** ~~quem~~]_i? EP
 Who be that DET boys stay(IPFV) with

- b. Who do the boys stay [PP **with** Ø]? English

- (19) a. *[NP Quem]_i é que os meninos ficam [PP **com** **ele**]? EP
 Who be that DET boys stay(IPFV) with 3SG

- b. *Who do the boys stay **with him**? English

The main goal of this chapter is to explore the properties and mechanisms of the strategy that forms [wh_[+PL] ... el], bringing some clarification to this topic.

³ See chapter 3, section 3.2.4., for Rizzi’s (1986) and Zribi-Hertz’s (1996) accounts of this strategy.

⁴ As in other Germanic languages, English Preposition Stranding consists of moving out of a PP the NP complement of the preposition, leaving it ‘stranded’ alone.

5.2. The preposition stranding with a spelled out trace (PSST) strategy

The discontinuous object [wh_[+PL] ... el] found in the wh-questions in CVC and illustrated by sentences (8)-(14) above is not novel and it should not be understood as an eccentricity of the language. In fact, this kind of chain is formed in other Portuguese-based Creoles, as Santome and Angolar (cf. (20)-(21)), among other languages⁵.

- (20) [Kê inen mwala]_i ku Zon fla ku bô fla ku-[ê]_i? Santome
which 3PL woman KU Zon say that 2SG talk with-3SG
Lit.: ‘Which women is that Zon said that you talked with him?’
‘Which women did Zon say you talked to?’
(Tjerk Hagemeijer, p.c.)

- (21) [Kê na pikina]_i ô ka fa ku [ê]_i? Angolar
which child little 2SG ASP talk with 3SG
Lit.: ‘Which little children you talked with him?’
‘Which children did you talk to?’
(adapted from Alexandre & Hagemeijer, 2002: 19)

Veenstra & Den Besten (1995) observed that Creole languages exhibit some variation on the topic of wh-extraction out of PPs, noting that some of them have “preposition stranding with trace spell-out”⁶, as in Papiamentu:

- (22) Ken nan a papia **kune**?
who 3PL PAST speak with-3SG
‘Who did they speak with?’
(Veenstra & den Besten, 1995: 314)

⁵ See Muysken (1977 and 1980), for Papiamentu, Veenstra & den Besten (1995), for Haitian, Jamaican, Krio and Saramaccan, and Holm & Patrick (2007), for a comparison between 18 Creole languages of different lexical bases, a.o.

⁶ Following the pioneer work on Papiamentu done by Muysken (1977, 1980, and thereafter), Veenstra & den Besten (op. cit.) do not separate, however, this strategy from the resumptive one.

Focusing on the specific nature of the chain [wh_[+PL] ... el] in (1b.), I claim that it is the output of the PSST strategy. If this object arises from a stranding mechanism⁷, the question in (23) must be addressed.

(23) Is this chain a type of resumption?

(i) If the answer is **yes**, why must the pronoun be invariable (in number features, at least) in certain contexts while it agrees with the head of the chain in other environments? I.e. what is the nature of *el* 's/he'? Is it a resumptive form? And, if so, why doesn't it occur in syntactic islands?

(ii) If the answer is **no**, does this chain involve movement of a wh-element (assuming, for the time being, that resumption does not involve wh-movement)? And, if so, why does the foot of the chain have to be spelled out in the form of an invariable pronoun?

The questions above lead us to the hypotheses expressed in (24).

HYPOTHESES on the PSST strategy

(24) **A** – PSST strategy is a subtype of resumption and therefore does not involve wh-movement. This also means that *el* 's/he' must be a specific kind of resumptive pronoun, an invariable one.

B – PSST strategy involves wh-movement, being an autonomous strategy. Then, 3SG *el* is not a resumptive pronoun, but a defective copy.

C – PSST strategy involves wh-movement and is a subtype of resumption. Then, the foot of the chain is spelled out by the invariable resumptive pronoun *el*.

In this chapter I will evaluate hypotheses (A), (B) and (C), considering three paths that can be pursued according to:

⁷ The term 'stranded' here is not to be mistaken with Boeckx's (2003a) proposal of a stranding analysis for resumptive pronouns, according to which these structures involve an A'-movement of the NP complement of a big DP. At this point, I am using the term 'stranded' empirically, i.e. because the preposition that selects for the wh-DP is left behind when the wh-DP moves.

- (i) The Copy Theory of Movement (Chomsky, 1995b)
- (ii) The Copy + Merge Theory of Movement (Nunes, 2004)
- (iii) Resumption as Stranding (Boeckx, 2003a)

I will argue that none of these theories provides a full-fledge account of this strategy and will propose an alternative analysis, which I will call the Defective Copy Theory of Movement.

5.2.1. The nature of the defective copy *el*

5.2.1.1. The distribution of *el*

Based on CVC data, I will propose that this language provides us some good piece of evidence for assuming a kind of pronominal object that I will call ‘defective copy’, as in (14), repeated here as (25).

- (25) [DP Ki skolas]_i ki Maria ta trabadja [PP/OBL_{Access} n’**el**/*es]_i?
 which schools that Maria IPFV work in.3SG/3PL
 Lit.: ‘Which schools is that Maria works in it?’
 ‘Which schools does Maria work in?’

The boldface pronominal form *el* in (25) exhibits the following set of properties:

- (26) a. This element is always the complement of a preposition that selects and Case-marks it, which is why it cannot occur in SBJ or OBJ positions, as in (27)–(29).
- b. Morphologically, it is always an invariable element assuming the form of a 3rd person singular pronoun, i.e. irrespective of number marking in its antecedent⁸.

⁸ Note also that according to Beermann et al. (2002), Edo, a West African language belonging to the Niger-Congo family, allows for two distinct ways of marking the extraction site of *wh*-elements in *wh*-questions and relative clauses. One of these strategies involves “a pronominal item, with a *constant form* (normally the form of a 3rd person sg. pronoun)” that the authors call ‘plug’, an ‘impoverished pronoun’ (as in (i)), distinguishing it from the resumptive pronoun. In Yoruba, another Niger-Congo language, there are also some related facts, what Adesola (2005) calls ‘agreeing’ versus ‘non-agreeing’ resumptive pronoun strategies (cf. (ii)).

(i) Dè òmwá nè Òtá mié ònrèn èbé?
 Who person that Ota receive(PFV) 3SG book

Edo

c. Syntactically, it occurs in matrix or embedded contexts, not being separated from the displaced wh-phrase coindexed with it by more than one bounding node, as (30), for an embedded context, and (31) illustrate.

- (27) *[_{DP/SBJ} Ki mudjeris]_i ki [e]_i ta badja sabi?
 which women that 3SG IPFV dance well
 ‘*Which women do she dance well?’

- (28) *[_{DP/DO} Ki librus]_i ki Djon kunpra-[I]_i?
 which books that Djon buy(PFV)-3SG
 ‘*Which books did Djon buy it?’

- (29) *[_{DP/OBJ} Ki mininus]_i ki bu da-[I]_i un libru?
 which boys that 2SG give(PFV)-3SG one book
 ‘*Which boys did you give him one book?’

- (30) [_{DP} Ki mininus]_i ki bu ka ta brinka ku-[e]_i?
 which boys that 2SG NEG IPFV play with-3SG
 Lit.: ‘Which boys is that you don’t play with him?’
 ‘Which boys don’t you play with?’

Nominative Island

- (31) *[Ki librus]_i ki [_{CP} papia d’[e]_i] é difisi?
 which books that talk of.3SG be difficult
 Lit.: ‘Which books is that to talk about it is difficult?’
 ‘Which books is it difficult to talk about?’

Lit.: ‘Who is the person that Ota received a book from him?’
 (adapted from Beermann et al. (2002: 5)

- (ii) **Olá àti Adé** ni [_{CP} NullOperator_i Ø [_{IP} ó [_{VP} t_i [_{VP} ra isu]]]]. Yoruba
 Ola and Ade be 3SG buy yam
 ‘It was Ola and Ade who bought yams’.
 (adapted from Adesola, 2005: 82)

Nevertheless, these languages show some important differences from CVC with respect to wh-question formation that I will not get into here.

The properties in (26) lead us to assume that sentences like the one in (25) involve a pronominal element that exhibits some particular behavior and that I will informally define as in (32).

Defective copy (informal definition)

- (32) *El* (in sentences like (25)) is a *defective copy*, i.e. an imperfect copy of a fronted wh-element.

Assuming (32) to be correct, I will show in section 5.2.1.2. that this spelled out copy seems to behave like a wh-gap (a syntactic variable) and, in section 5.2.2., we will see that it is derived by wh-movement.

5.2.1.2. The defective copy *el* is a variable in the narrow syntax

Studying Italian Clitic Left Dislocation constructions (CLLD), Cinque (1990: 110) proposed two types of variables: ‘pure variables’, i.e. wh-traces [-anaphoric, -pronominal] A'-bound by an Operator that ends up in SpecCP via wh-movement; and ‘pronominal variables’, i.e. base generated empty categories [-anaphoric, +pronominal] (*pro*), A'-bound by an abstract Operator inserted in SpecCP.

Being the form of a pronoun that occurs in nontrivial wh-chains, it must be investigated whether *el* behaves like a ‘pure’ variable, i.e. a wh-gap, or if whether has some idiosyncratic behavior.

In this section, I will investigate whether some of the tests used in the relevant literature used as a diagnosis for variable status prove the syntactic variable nature of *el* in CVC, namely, (i) the ability to license parasitic gaps (see Ross, 1967; Chomsky, 1982; Engdahl, 1985, a.o.); (ii) the sensitivity to Strong Crossover effects (see Postal, 1971; Chomsky, 1977, a.o.); and (iii) the possibility to provide functional and pair-list answers (see Chao & Sells, 1983; Asudeh, 2004, a.o.).

(i) Licensing of parasitic gaps

As it is well known, parasitic gaps are empty categories licensed only by variables in the narrow syntax (as in (33)), and they cannot be licensed by overt

‘common’ pronouns, as in (34), or by resumptive pronouns (see (35), for the typical context where resumptive pronouns are found in CVC wh-questions).

- (33) [Ki kuadru]_i ki bu kunpra [~~ki kuadru~~]_i [_{CP} sen odja *pg_i*]?
 which picture that 2SG buy(PFV) without see
 ‘Which picture did you buy without looking?’

- (34) Q: Bu ta konxe Maria?
 2SG IPFV know Maria
 ‘Do you know Maria?’

A: *Nau, mas N da-[I]_i mantenha
 no, but 1SG give(PFV)-3SG compliment
 [_{CP} sen N konxe *pg_i*].
 without 1SG know
 ‘*No, but I said hello to her without knowing.’

Complex NP Island

- (35) *[Ki mudjeris]_i ki Djon atxa un omi
 which women that Djon find(PFV) DET man
 [_{CP} ki papia ku-[es]_i] [_{CP} sen e konxe *pg_i*]?
 that talk(PFV) with-3PL without 3SG know
 ‘*Which women did Djon find a man that talked with them without knowing?’

Following Chomsky (1982), Cinque (1990) argues that the pronominal variables that occur in CLLD constructions can never license parasitic gaps, and hence his claim that they are only variables in LF. As *el* is an overt pronominal element, we should expect it not to be able to license a parasitic gap (as in (34) above), contrary to fact:

- (36) [Ki mudjeris]_i ki Djon papia ku-[**el**]_i
 which women that Djon talk(PFV) with-3SG
 [_{CP} sen e konxe *pg_i*]?
 without 3SG know
 Lit.: ‘Which women is that Djon talked with him without him knowing?’
 ‘Which women did Djon talk to without knowing?’

(ii) Sensitivity to Strong Crossover effects

Ross’s (1967: 73) account of the ungrammaticality of utterances in which an element was moved over a co-referent DP is stated as in (37):

- (37) “The crossover condition
 No NP mentioned in the structural index of a transformation may be reordered by that rule in such a way as to cross over a coreferential NP”.

As we are dealing with the ‘reordering’ of wh-elements, I will follow Safir (1996: 314), who establishes that the typical configuration of Strong Crossover is the one in which “a trace left by wh-movement is c-commanded by a coreferential NP within the scope of the wh-phrase that has been displaced (...)”, giving rise to a Principle C violation.

One can suppose, however, that *el*, being a pronoun, is not subject to Principle C but to Principle B of the Binding Theory, according to which a pronoun must be free in its local domain⁹, but may be coindexed with a DP that occurs out of it (cf. (38)).

- (38) [Suzana]_i fla [_{CP} ma bu badja ku-[**el**]_{i/j} na festa].
 Suzana say(PFV) that 2SG dance(PFV) with-3SG in party
 ‘Suzana said that you danced with her at the party.’

As we can see, in (38) *el* may have the same reference as *Suzana* or it may refer to some other individual not introduced in the discourse, because *Suzana* is outside *el*’s local

⁹ Chomsky (1986b: 169) proposes that “the local domain for (...) a pronominal α [is] the minimal governing category of α , where a governing category is a maximal projection containing both a subject and a lexical category governing α (hence, containing α)”.

domain¹⁰. Sentence (39) shows that *el* in the PSST strategy is sensitive to Strong Crossover, though; showing that the *el* form in (39) has a different nature from *el* in (38).

- (39) **[Ki mininus femia]_i ki [Maria ku Tareza]_i fla [CP ma*
which boys female that Maria with Tareza say(PFV) that
Djon ka ta papia ku-[el]_i?
Djon NEG IPFV talk with-3SG
 Lit.: ‘Which girls is that Maria and Tareza said that Djon does not talk with him?’
 ‘Which girls did Maria and Tareza say that Djon does not talk to?’

Furthermore, if the *el* form of PSST strategy were a ‘true’ pronoun it should be possible for it to occur coordinated with a noun (Tjerk Hagemeijer, p.c.), as in (40).

- (40) *Josi odja [Coord el ku Maria] na iasi.*
Josi see(PFV) 3SG and Maria in hyace
 ‘Josi saw him/her and Maria in the ‘bus’.’

However, as the output of a PSST strategy, *el* cannot be coordinated, as in (41), contrary to the resumptive pronoun in (42).

- (41) **Ki otoris ki Maria ta kre papia*
which authors that Maria IPFV want talk
[Coord d’el y di Veiga] na si diskursu?
of-3SG and of Veiga in POSS.3SG speech
 Lit.: ‘Which authors is that Maria wants to talk about him and Veiga in her speech?’

The impossibility of extracting a DP recovered by *el* (but not by *es*) out of a coordinated conjunct¹¹ argues for its non-pronominal nature, reinforcing the variable status of *el*, and it is further evidence for wh-movement.

¹⁰ On several positions about the interpretation of third-person singular pronouns in English, for instance, see Elbourne (2008).

Complex NP Island

- (42) Ki mininus femia ki Maria ta konxe un omi
 which boys female that Maria IPFV know a man
 ki ka ta papia [_{Coord} ku-es y ku tudu kes mosu groseru]?
 that NEG IPFV talk with.3PL and with all DET boy rude
 Lit.: ‘Which girls is that Maria knows a man that does not talk with them and
 with all the rude boys?’

Note also that the non-pronominal character of *el* is highlighted by the fact that it cannot be interpreted as co-referring to a possible antecedent DP which is out of its local domain (and has not been extracted from this local domain), as *Djon* in (43).

- (43) [Ki mininus]_i ki [Djon]_j fla
 which boys that Djon say(PFV)
 [_{CP} ma bu papia ku-[**el**]_{i/*j}]?¹²
 that 2SG talk(PFV) with-3SG
 Lit.: ‘Which boys is that Djon said that you talked with him?’
 ‘Which boys did Djon say that you talked to?’

Nevertheless, one can even suppose that the Strong Crossover test does not function if we assume that sentences derived through the PSST strategy involve no wh-movement at all. In that case, *ki mininus femia* in (39) would be base-generated in the topmost SpecCP and there would be no cross over. In fact, if we take a sentence formed by a non-movement strategy, as in (44) below, we observe that the resumptive pronoun *es* ‘them’ cannot be coindexed with *Maria ku Tareza* and *ki mininus femia* if we want the

¹¹ This falls within the constraint on movement in coordinate structures proposed by Ross (1967):

Coordinate Structure Constraint

- (i) “In a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct”.

Assuming this constraint on movement, the ungrammaticality of *el* in sentence (41) in the text is straightforwardly explained because *el* is derived by wh-movement. Meanwhile, *es* in (42) in the text, being grammatical within the conjunct *ku-es y ku tudu kes mosu groseru*, must be analyzed as the output of a non wh-movement operation.

¹² In fact, my informants suggested that if I wanted *Djon* to be interpreted from the embedded sentence, then the sentence should be the one in (i), with a gap in the embedded subject position, and *el* still coindexed with *ki mininus*:

- (i) [Ki mininus]_i ki [Djon]_j fla [_{CP} ma [Djon]_j papia ku-[**el**]_i]?
 which boys that Djon say(PFV) that talk(PFV) with-3SG
 ‘Which boys did Djon say that he talked with?’

output to be grammatical. At first sight, then, sentence (44) establishes a parallel between *el* and *es*.

Complex NP Island

- (44) *[Ki mininus femia]_i ki [Maria ku Tareza]_i ta konxe
 which boys female that Maria with Tareza IPFV know
 un [CP omi_i [C° ki] ka ta papia ku-[es]_i]?
 DET man that NEG IPFV talk with-3PL
 Lit.: ‘Which girls is that Maria and Tareza know a man that doesn’t talk with them?’

The violation of Principle C of the Binding Theory in (44) shows that the resumptive pronouns and *el* behave alike with respect to Strong Crossover. This does not mean that both pronouns (*es* and *el*) should receive the same analysis. Actually, in the case of (44), *es* is c-commanded by the relative Operator [_{DP} *omi*], in the SpecCP position of the relative clause *ki ka ta papia ku-es*. Therefore, (44) is not a Strong Crossover configuration and no misunderstanding between *es* in (44) and *el* in (39) should arise, i.e. (39) and (44) are both excluded by Principle C, but only (39) is a Strong Crossover configuration.

The ungrammaticality of (39) and (44) shows us that the sensitivity to Strong Crossover effects does not seem to be, at least straightforwardly, the right syntactic test to distinguish defective copies from resumptive pronouns nor to account for their variable status.

(iii) Providing functional and pair-list answers

We have seen so far that, syntactically, *el* behaves like a wh-gap in licensing parasitic gaps. We have said nothing about its semantic status, though. In the relevant literature, two tests that Chao & Sells (1983) proposed are used to prove the non-A'-bound variable nature of resumptive pronouns in wh-questions, namely, the inability of resumptive pronouns to provide pair-list answers to resumptive wh-questions (cf. (45)), and to be understood functionally (cf. (46)), contrary to what is observed when a wh-gap is involved.

(45) Q: Who did you say you'd forgotten whether she had paid her fees?

A:

a. Abby

b. #Abby, Buffy, and Connie.

(Chao & Sells, 1983, ap. Asudeh, 2004: 333)

(46) Q: Which woman does no Englishman even wonder if she will make a good wife?

A:

a. Margaret Thatcher.

b. #The one his mother likes best.

(id., p. 334)

As I am assuming that *el* behaves like a wh-gap, these two tests must then render grammatical sentences in CVC. That is the situation found in (47) and (48), for wh-questions formed by the PSST strategy¹³, parallel to sentences (45) and (46), that have been always considered to be instances of resumption.

[N ta atxa ma Maria gosta di Djon, Zé, Minda ku Xepa. / I think that Maria likes Djon, Zé, Minda and Xepa.]

(47) Q: [Ki mininu]_i ki bu ta atxa ma Maria gusta d'[el]_i?
which boy that 2SG IPFV think that Maria like(IPFV) of-3SG

Lit.: 'Which kid is that you think that Maria likes him?'

'Which kid do you think that Maria likes?'

A1: Djon.

A2: *Djon, Zé, Minda ku Xepa.

Lit.: 'Djon, Zé, Minda and Xepa.'

¹³ Although sentences (45) and (46) are instances of resumption in wh-questions, I will compare them to (47) and (48), wh-questions derived by the PSST strategy, because in the literature they have been confused and undistinguished between each other. The grammaticality judgements are the same, though, proving that the functional and pair-list answers do not testify for the non-A'-bound variable status of *el* (or even of *es*).

- (48) Q: [Ki mudjeris]_i ki Djon ta fla
 which women that Djon IPFV say
 ma se mai ka ta dexe-l papia ku-[el]_i?
 that POSS.3SG mother NEG IPFV let-3SG talk with-3SG
 Lit.: ‘Which women is that Djon say that his mother doesn’t let him talk with-
 him?’

‘Which women does Djon say that his mother doesn’t let him talk to?’

A1: Djuana ku Bina.

‘Djuana and Bina.’

A2: Tudu kes mudjer nobu ki tene fidju.

All DET woman young that have(IPFV) son

‘Every young woman that has sons.’

When a null wh-gap is involved, as in sentence (49), the same effects are obtained.

- (49) Q: [Di kenha]_i ki bu ta atxa ma Maria gosta [~~di kenha~~]_i?
 of who that 2SG IPFV think that Maria like(IPFV)
 Lit.: ‘Of who is that you think that Maria likes?’
 ‘Who do you think that Maria likes?’

A1: Djon (Zé, Minda ku Xepa).

Lit.: ‘Djon (Zé, Minda and Xepa).’

A2: Tudu kes mininu ki ta kanta sabi.

All DET boy that IPFV sing well

‘Every child that sings well.’

As sentences (47)-(48) show and (49) reinforces, these two tests are not useful to prove the non-A´-bound nature of *el* in wh-questions, and I will leave open its semantic status. In fact, the tests proposed by Chao & Sells (op. cit.) cannot distinguish between wh-gaps (whether empty or spelled out, as *el*) and resumptive pronouns. CVC data proves this to be correct, for we obtain exactly the same effects/readings in (50) as in (47) and (48).

Complex NP Island

- (50) Q: [Ki mudjeris]_i ki Djon ta konxe un omi
which women that Djon IPFV know a man
ki se mai ka ta dexe-l papia ku-[es]_i?
that POSS.3SG mother NEG IPFV let-3SG talk with-3SG
Lit.: ‘Which women is that Djon knows a man that his mother doesn’t let him talk with them?’

A1: Djuana ku Bina.

‘Djuana and Bina’.

A2: Tudu kes mudjer nobu ki tene fidju.

All DET woman young that have(IPFV) son

Lit.: ‘Every young woman that has sons.’

And this is not an isolated case, since in EP or English¹⁴, for instance, one also gets the same readings with resumptive pronouns, as in (51) and (52), respectively.

- (51) Q: [Que mulheres]_i é que o João conhece um homem EP
which women be that DET John know a man
que a mãe não o deixa falar com [elas]_i?
that DET mother NEG 3SG let talk with-3SG
Lit.: ‘Which women does John know a man that his mother doesn’t let him talk with them?’

A1: Com a Maria e a Sara.

‘With Maria and Sara.’

A2: Com mulheres casadas.

With women married

‘With married women.’

¹⁴ I am not suggesting that Chao & Sells (1983) grammaticality judgements are wrong, but I am saying that the way they use the test is misleading because, in their examples (see (45) and (46) in the text), the antecedent of the resumptive pronoun is not overtly plural (e.g. *who*), and thus they could not obtain a (plural) pair-list answer.

(52) a. Q: Which students did you say you'd forgotten whether they had paid their fees?

A: Abby, Buffy, and Connie.

b. Q: Which women did John's mother ask whether they will be a good nanny?

A: The ones his mother finds responsible.

Summing up, *el* in the object [$wh_{[+PL]}$... *el*] of wh-questions in CVC behaves like a syntactic variable in the narrow syntax because its licensing parasitic gaps, although its sensitivity to Strong Crossover effects along with its semantic nature are not so clear.

The next section will present evidence for a wh-movement approach of the constructions where this *el* appears in.

5.2.2. PSST involves wh-movement

Since Chomsky (1977)¹⁵ wh-movement has been treated as a general rule of 'core grammars' that is constrained by some (also general) conditions. In the seventies, Chomsky assumed those conditions to be the following ones:

Cycle (a Subjacency condition)

(53) "A cyclic rule [as wh-movement] cannot move a phrase from position *Y* to position *X* (or conversely) in [(i)]:

(i) ... *X* ... [α ... [β ... *Y* ...] ...] ... *X* ..., where α and β are cyclic nodes".

(op. cit., p. 73)

¹⁵ Note that Chomsky's (1977) paper consists of an upgrading of his "Conditions on Transformations" (1973), and therefore I will only refer to the work known as "On Wh-Movement".

*Propositional-island condition (PIC)*¹⁶

- (54) “no rule can “involve” X and Y where α is a finite clause (tensed-S)” (id., p. 74), in a structure of the form (ii):

(ii) ... X ... [α ... Y ...] ... X ...

Specified Subject condition (SSC)

- (55) “no rule can “involve” X and Y where α contains a specified subject, i.e., a subject not containing Y and not controlled by X ” (ibid.), as in (ii) above.

According to Chomsky (1977: 86), wh-movement exhibits the general properties presented in (56).

- (56) a. “It leaves a gap.
b. Where there is a bridge, there is an apparent violation of subjacency, PIC, and SSC.
c. It observes Complex NP constraint (CNPC).
d. It observes wh-islands constraints”.

These properties have been used in the relevant literature thereafter as a kind of diagnosis for wh-movement. They have been refined and readapted to new theoretical frameworks, but the essence remains unchanged, though, since locality constraints and some sort of ‘deletion’ are still at stake.

In the Principles & Parameters framework (Chomsky, 1981, 1986a and 1986b), wh-movement receives a more principled-oriented approach¹⁷, and the transformational component of the grammar is reduced to Move- α ¹⁸, a general movement rule that subsumes Move-wh. Some of the conditions on wh-movement, e.g. Subjacency, are now included into the notion of Barrier:

¹⁶ This condition is a revision of Chomsky (1973)’s *Tensed-S condition*, which was stated as in (i):

(i) “No rule can involve X , Y in the structure ... X ... [α ... Y ...] ... where α is a tensed sentence”.

Moreover, this constraint should not be mistaken with another PIC (Phase-Impenetrability Condition), proposed by Chomsky (1998, 2001), and that I will address latter in this chapter.

¹⁷ Chomsky (1986b: 70) assumes that the theory of grammar has to “seek general principles governing rule application that can be abstracted from individual rules and attributed to the initial state S_0 , thus expressed in UG rather than particular grammars”.

¹⁸ Move- α says that some category α can be moved anytime anywhere.

- (57) γ is a barrier to β iff (a) or (b):
- a. “ γ is a barrier by inheritance if the X^{\max} it most closely dominates is a blocking category (BC) [i.e., if it is not L-marked]”.
 - b. “[γ] it is a barrier inherently if it is a BC itself”
- (Chomsky, 1986a: 88).

In the Minimalist Program (Chomsky, 1995b, 1998, 2001) movement becomes driven by derivational economy principles and is understood as an operation of Last Resort¹⁹, being triggered to eliminate uninterpretable features of the moved element. In this program, Move is interpreted as internal Merge, being an operation of composition, i.e. its application is needed to form chains, since these syntactic objects are not inserted by (external) Merge.

Any language-system has to include, according to Chomsky (1998: 14), the following three operations:

- (58) a. *Merge*
 “[it] takes two syntactic objects (α , β) and forms $K(\alpha$, β) from them”.
- b. *Agree*
 “[it] establishes a relation (agreement, Case-checking) between an LI α and a feature F in some restricted search space (its domain)”.
- c. *Move*
 “[it] establishes agreement between α and F and merges P(F) to α P, where P(F) is a phrase determined by F (...) and α P is a projection headed by α ”.

Despite this theoretical turn, displacement of wh-constituents is still ruled by locality conditions. In particular, Chomsky (1995b), following Rizzi’s (1990) Relativized Minimality, assumes that the operation Move has to incorporate the notion of Minimal Link Condition (MLC), as in (53).

Minimal Link Condition

- (59) “K attracts α only if there is no β , β closer to K than α , such that K attracts β ”
 (op. cit., p. 311).

¹⁹ Chomsky (1995b: 200) considers that “a shorter derivation is preferred to a longer one, and if the derivation D converges without application of some operation, then that application is disallowed”.

And Chomsky's (1977) condition on cyclicity (Subjacency) is viewed in the MP as a Phase-Impenetrability Condition (PIC), as in (60).

Phase-Impenetrability Condition

- (60) "In phase α with head H, the domain of H is not accessible to operations outside α , but only H and its edge", (Chomsky, 1998: 22).

Having reviewed some of the main concepts proposed to capture the properties of displaced wh-elements, in the next sections I will argue that the PSST strategy in CVC exhibits such properties and, therefore, is a process that involves movement of a wh-constituent.

5.2.2.1. Sensitivity to long and successive-cyclic movement

In the P&P framework, the elements that are displaced through either long or successive-cyclic wh-movement leave a trace, i.e. an empty category that is identified by the Empty Category Principle (ECP), as in (61).

- (61) "ECP: [$_{\alpha}$ e] must be properly governed".
(Chomsky, 1981: 250)

In the line of Rizzi's (1990) formulation of ECP (cf. chap. 3), Chomsky (1995b: 91) assumes that traces must be 'properly governed', as stated in (62):

Proper government

- (62) "both antecedent- and head-governed by a lexical feature (i.e. not C)".

Furthermore, Cinque (1990: 49), to account for the illformedness of some instances of successive-cyclic wh-movement, proposes a revision of the ECP, where a categorial feature of the head-governor is specified, as in (63):

- (63) "A nonpronominal EC [empty category] must be properly head-governed by a head nondistinct from [+V]".

5.2.2.1.1. Sensitivity to long movement

Long movement (prototypically of θ -elements) is sensitive only to strong islands, such as Nominative, Complex NP and Adjunct islands in (64)-(66).

Nominative Island

- (64) a. * [Di ki librus]_i ki [_{CP} papia [~~di ki librus~~]_i] é difisi?
 of which books that talk(IPFV) be difficult

Lit.: ‘Of which books is that to talk is difficult?’

- b. * [Ki librus]_i ki [_{CP} papia d’[el]_i] é difisi?
 which books that talk of.3SG be difficult

Lit.: ‘Which books is that to talk about it is difficult?’

Both: ‘Which books is it difficult to talk about them?’

Complex NP Island

- (65) a. * [Ku ki mudjeris]_i ki dja bu atxa
 with which women that already 2SG find(PFV)
 [_{DP} un omi [_{CP} ki papia [~~ku ki mudjeris~~]_i]]?
 a man that talk(PFV)

Lit.: ‘With which women is that you found a man that talked?’

- b. * [Ki mudjeris]_i ki dja bu atxa
 which women that already 2SG find(PFV)

[_{DP} un omi [_{CP} ki papia ku-[el]_i]]?
 a man that talk(PFV) with-3SG

Lit.: ‘Which women is that you found a man that talked with him?’

Both: ‘Which women did you find a man that talked with them?’

Adjunct Island

- (66) a. * [Ku ki amigus]_i ki bu bai Fransa
 with which friends that 2SG go(PFV) France
 ku Maria [_{CP} sen papia ~~[ku ki amigus]_i]?
 with Maria without talk~~

Lit.: ‘With which friends is that you went to France with Maria without talking?’

- b. * [Ki amigus]_i ki bu bai Fransa ku Maria
 which friends that 2SG go(PFV) France with Maria
 [_{CP} sen papia ku-**[el]**]_i?
 without talk with-3SG

Lit.: ‘Which friends is that you went to France with Maria without talking with him?’

Both: ‘Which friends did you go to France with Maria without talking with them?’

As we can observe from sentences (64)-(66), in CVC both the ‘silent’ wh-gap and the PSST strategies ((a. and b.) sentences, respectively) disallow long wh-movement in strong islands. The output of both strategies is also sensitive to long movement in weak islands, as in (67).

Wh-island

- (67) a. * [Ku ki batukaderas di Pó di Tera]_i ki Djon sabe
 with which batuk.players of Pó di Tera that Djon know(IPFV)
 [_{CP} [pamodi]_j ki Maria ka ta papia
 why that Maria NEG IPFV talk
~~[ku ki batukaderas di Pó di Tera]_i [pamodi]_j]?
 Lit.: ‘With which batuk.players of Pó di Tera is that Djon knows why Maria~~

doesn’t talk?’

- b. * [Ki batukaderas di Pó di Tera]_i ki Djon sabe
 which batuku.players of Pó di Tera that Djon know(IPFV)
 [_{CP} [pamodi]_j ki Maria ka ta papia ku-[el]_i [~~pamodi~~]_j]?
 why that Maria NEG IPFV talk with-3SG
 Lit.: ‘Which batuku players of Pó di Tera is that Djon knows why Maria doesn’t
 talk with him?’
 Both: ‘??Which batuku players of Pó di Tera does Djon know why Maria doesn’t
 talk to?’

Thus, concerning long wh-movement in weak islands, CVC does not behave like EP and English, where long wh-extraction out of a wh-island is allowed, yielding grammatical or slightly marginal outputs, as shown respectively in (68) and (69).

- (68) Com quem é que o João não sabe quando a Maria falou? EP
 with who be that DET João NEG know when DET Maria talk
 ‘??With whom didn’t João know when Maria talk?’

- (69) ??Which issues doesn’t John know when his parents argue about? English

The impossibility of long movement in weak island contexts, shows that CVC is a language with strong requirements on locality conditions²⁰.

More precisely, it seems that in CVC it is not possible to antecedent-govern the tail of the chain at distance, resulting in an ECP violation. Namely, in (67b.) *el*, being the complement of the preposition *ku* ‘with’, is not head-governed by it since the preposition is not [+V], and the wh-pronoun *pamodi* in the lowest SpecCP is not *el*’s antecedent. Then, *pamodi* blocks the government of *el* by its real antecedent (*ki batukaderas di Pó di Tera*) in Spec of the highest CP and this results in an ECP violation.

It must be stressed, however, that the language in analysis allows long movement in weak islands contexts if the constituent wh-extracted is a subject (as in

²⁰ Recall that the two basic concepts of locality that are referred to in the literature of the most recent years are the conditions of ‘relativized minimality’ (Rizzi, 1990, see (97) of chap. 3) and ‘phase-impenetrability’ (Chomsky, 1998, and thereafter, as in (60) above).

(70a.), a case of a subject of a transitive verb, and (70b.), a case of a subject of an unaccusative verb), or a direct object, as in (71).

Wh-island

- (70) a. [Ki fidjus di Nha Xepa]_i ki Djon purgunta Manel
 which sons of Mrs. Xepa that Djon ask(PFV) Manel
 [CP [pamodi]_j ki ~~[ki fidjus di Nha Xepa]_i~~ ka ta odja ~~[pamodi]_j]?
 why that NEG IPFV see
 Lit.: ‘Which sons of Mrs. Xepa is that Djon asked Manel why do not see?’
 ‘Which sons of Mrs. Xepa did Djon ask Manel why don’t they see?’~~
- b. [Ki fidjus di Nastasi]_i ki Zé purgunta Manel
 which sons of Nastasi that Zé ask(PFV) Manel
 [CP [ki dia]_j ki ~~[ki fidjus di Nastasi]_i~~ more ~~[ki fidjus di Nastasi]_i~~ ~~[ki dia]_j]?
 Which day that die(PFV)
 Lit.: ‘Which sons of Nastasi is that Zé asked Manel when died?’
 ‘Which sons of Nastasi did Zé ask Manel when did they die?’~~

Wh-island

- (71) [Ki mininus]_i ki Zé sabe [CP [ki dia]_j
 which boys that Zé know(IPFV) which day
 ki Maria odja ~~[DP/DO<theme> ki mininus]_i~~ na praia di mar ~~[ki dia]_j]?
 that Maria see(PFV) in beach of sea
 Lit.: ‘Which boys is that Zé knows which day is that Maria saw in the beach?’
 ‘?Which boys does Zé know when Maria saw in the beach?’~~

By allowing the extraction of a subject in (70) and a DO in (71), CVC behaves like EP, in (72)-(73), and only partially like English, since this language only allows for DO extraction in (75), rejecting subject extraction, in (74).

- (72) a. [Que filhos]_i da D. Maria é que o Zé EP
 which sons of.DET Mrs. Maria be that DET Zé
 perguntou ao Manel [_{CP} [porque]_j é que
 ask(PFV) to.DET Manel why be that
 [_{DP/SBJ} ~~que filhos~~]_i não vêm [~~porque~~]_j?
 NEG see(IPFV)
- b. [Que filhos]_i da Nastácia é que o Zé
 which sons of.DET Nastácia be that DET Zé
 perguntou ao Manel [_{CP} [quando]_j [~~que filhos~~]_i
 ask(PFV) to.DET Manel when
 morreram [~~quando~~]_j?
 die(PFV)
 Both: (= (72))

- (73) [Que livros]_i é que o Zé perguntou ao Manel EP
 which books be that DET Zé ask(PFV) to.DET Manel
 [_{CP} [porque]_j é que a Maria vendeu [_{DP/DO} ~~que livros~~]_i [~~porque~~]_j?
 why be that DET Maria sell(PFV)
 ‘?Which books did Zé ask Manel why Maria sold?’

- (74) a. *Which sons of Mary did John ask Thomas why didn’t see? English
 b. *Which sons of Mary did John ask Thomas when did die?

- (75) ‘?Which boys does Joe know when Maria saw in the beach?’

Sentences like the ones in (70) and (71) are particularly interesting since they highlight the fact that CVC allows subject and DO extraction (long movement) out of a wh-island, only blocking extraction out of PP complements that occur within a wh-island (compare those sentences with (67a. and b.), which are ungrammatical).

Rizzi (1990: 76) argues that in a Null Subject language subject extraction out of wh-islands is possible (as in (72), for EP) because he assumes that the subject is moved from a postverbal position, leaving a trace properly head-governed by T° and θ-

governed by V^{o21} . However, CVC is not a ‘pure’ Null Subject language²² and the copy of the subject in (70), for instance, cannot be head-governed by T^o . But subject extraction out of wh-islands in CVC, as in (70), can be explained assuming the Phase-Impenetrability Condition, i.e. being at the edge of a phase, the subject is accessible to further operations.

Direct object extraction out of wh-islands in CVC, as in (71), is accounted for simply by saying that the copy of the DO is properly head-governed by the verb *odja* ‘to see’. Once more, along the lines of Rizzi (1990), by assuming that it is not the distinction between A- and A’-positions that matters, but the nature of the θ -role of the elements displaced²³, does not also seem the better option, since the object of the preposition in (67b.) – *ki batukaderas di Pó di Tera* – have the referential θ -role <goal> but cannot be extracted out of a wh-island.

In fact, sentence (67b.) can only be saved by a resumptive strategy, as in (76), reinforcing the fact that the prepositional object cannot be moved out of a weak island – and reinforcing also a non-movement analysis of the resumptive structures.

Wh-Island

- (76) [Ki batukaderas di Pó di Tera]_i ki Djon sabe [_{CP} pamodi ki Maria ka ta papia ku-
[es]_i]?

Lit.: ‘Which batuku players of Pó di Tera is that Djon knows why Maria doesn’t talk with them?’

Huang (1982: 384) observed that in Chinese some wh-phrases are exempt from island violations, as the ones in (68) and (69) for EP and English, which allow for long wh-movement in weak islands, while other wh-phrases (as *weisheme* ‘why’ and *zeme* ‘how’) cannot be extracted out of these contexts without yielding ungrammaticality.

²¹ See Rizzi’s definition of the ECP and of the condition on Relativized Minimality in chap. 3, section 3.4.

²² See Duarte et al. (2002), who propose that the Null Subject parameter should be divided into two subparameters related to the possible occurrence of null referential subjects, as in (i).

Null Subject parameter

- | | | |
|-----|---|-----------------|
| (i) | a. the non-referential subject is null: | <i>Yes / No</i> |
| | b. the referential subject is null: | <i>Yes / No</i> |

According to this conception of the Null Subject parameter, CVC is specified for *yes* in (a.) and for *no* in (b.), i.e. is a language that allows for null non-referential subjects and disallows for null referential subjects (see Costa & Pratas, 2008, for the relevant examples).

²³ The author distinguishes referential θ -roles (*agent*, *theme*, *goal*, etc.) from non-referential θ -roles (*measure*, *manner*, etc.).

These facts lead Huang to propose an argument-adjunct asymmetry²⁴. Considering this, I claim that in CVC the complements of prepositions (even when they are selected by the verb) display an asymmetric behavior with respect to the other DPs, since the former but not the latter cannot be extracted out of wh-islands.

I conclude, thus, that *el* behaves exactly like an empty category, specifically a wh-gap. The fact that *el* cannot survive in (67b.), rendering an ECP violation, may be an evidence for the presence of the copy of *ki batukaderas di Pó di Tera* in the LF component²⁵. More precisely, the features of the wh-constituent that moves up to SpecCP leave a residue in LF and, since at that level they are not properly identified, their counterpart in the PF component cannot be *el*.

5.2.2.1.2. Sensitivity to successive-cyclic movement

Successive-cyclic wh-movement (prototypically of adjuncts) is sensitive both to strong (cf. (77)) and weak islands and is not possible in the case of the PSST strategy in CVC, confirming that this is a movement strategy, as we can see in wh-islands in which the questioned constituents are extracted out of a CP introduced by wh-pronouns such as *pamodi* ‘why’ (cf. (78a.)) or *ki dia* ‘when’ (cf. (78b.)).

Complex NP island

- (77) **[Ki mininas]_i ki Djon ta konxe [_{DP} un omi*
 which girls that Djon IPFV know DET man
 _{[CP ki ka ta studa ku-**[el]_i]]?**}
 that NEG IPFV study with-3SG

Lit.: ‘Which girls is that Djon knows a man that doesn’t study with him?’

²⁴ Huang (id.) also related this kind of asymmetry to the Subject-Object asymmetry that shows up in that-trace effect cases.

²⁵ Recall that Subjacency violations leave no residue at LF, while ECP violations do (cf. Chomsky, 1995b: 91).

Wh-island

- (78) a. *[Ki mininas]_i ki Djon ka sabe
 which girls that Djon NEG know(IPFV)
 [CP [pamodi]_j ki Zé ta studa ku-[el]_i ~~[pamodi]_j~~?
 why that Zé IPFV study with-3SG
 Lit.: ‘Which girls is that Djon doesn’t know why Zé studies with him?’
- b. *[Ki mudjeris]_i ki Djon ka sabe
 which women that Djon NEG know(IPFV)
 [CP [ki dia]_j k’e ta bai djanta ku-[el]_i ~~[ki dia]_j~~?
 which day that-3SG IPFV go diner with-3SG
 Lit.: ‘Which women is that John does not know when is he going to diner with him?’

Compare sentences (77)-(78), involving extraction out of strong and weak islands of the DP complement of a preposition, with the ones involving extraction of *pamodi* ‘why’ and *ki dia* ‘which day/when’ + a (null) gap, which does not allow either successive-cyclic movement in strong or weak islands, as in (79) and (80), respectively.

Complex NP island

- (79) *[Pamodi]_i ki Djon ta konxe [DP un omi
 why that Djon IPFV know DET man
 [CP ~~[pamodi]_j~~ ki ka ta papia ku mudjeris ~~[pamodi]_j~~?
 that NEG IPFV talk with women
 ‘*Why does Djon know a man that doesn’t talk with women?’

Wh-island

- (80) a. *[Pamodi]_j ki Djon sabe [CP [ki fidju di Nastasi]_i
 why that Djon know(IPFV) which son of Nastasi
 ki ~~[ki fidju di Nastasi]_i~~ more ~~[pamodi]_j~~?
 that die
 ‘*Why does Djon know which Nastasi’s son died?’

b. *[Ki dia]_i ki Djon purgunta oxi
 which day that Djon ask(PFV) today
 [_{CP} [kenha]_i ki [~~kenha~~]_i kasa [~~ki dia~~]_j]?
 who that marry
 ‘*When did Djon ask today who married?’

Taking *el* to be a wh-gap spelled out, the ungrammaticality of (77) and (78) is an expected output.

5.2.2.2. Rejection of pied-piping and of P-stranding + null gap

The PSST strategy described so far for CVC wh-questions is an alternative option to the gap strategy with PP pied-piping. In fact, the PSST strategy seems to be the preferred one²⁶, which might mean that pied-piping a PP is a heavier process than to fill the complement of a preposition with a pronoun²⁷.

The coinage of the term ‘pied-piping’ is due to Ross (1967), by R. Lakoff’s suggestion (op. cit., p. 144, fn. 23). Ross (1967: 114) proposes that pied-piping is obligatory in certain environments and states this in the form of a *Pied Piping Convention*:

- (81) “Any transformation which is stated in such a way as to effect the reordering of some specified node NP, where this node is preceded and followed by variables in the structural index of the rule, may apply to this NP or to any non-coordinate NP which dominates it, as long as there are no occurrences of any coordinate node, nor of the node S, on the branch connecting the higher node and the specified node”.

²⁶ I do not have statistical studies to base my argument on but, in elicitation tasks, almost all my informants suggested an alternative to these sentences that involved the PSST strategy.

²⁷ Note that some scholars claim that pied-piping is not a natural process. As an example of this, for Brazilian Portuguese (specifically, Rio de Janeiro area of Niterói, São Gonçalo and Maricá), Kenedy (2005, 2007) proposes a hypothesis of the anti-naturality of pied-piping in relative clauses, according to which to pied-pipe prepositioned relative clauses is not a natural process in the grammar of Portuguese or English, and probably in no human language. The author confirmed his hypothesis by testing relative clauses with 40 individuals through an experiment based on automatic judgments that result from a ‘Rapid Serial Visual Presentation’.

I will not pursue this view, though, and by saying that pied-piping is a heavy process I do not mean that it is ‘anti-natural’. It only means that PP pied-piping drags more phonetic material than the mechanism of leaving the preposition in its original site followed by a 3rd person singular pronoun; as a consequence, the processing task is heavier.

Ross's Pied Piping Convention describes the situation where a wh-phrase is fronted, and states that both wh-DPs and wh-PPs can be dislocated to sentence-initial position, as in English *which boys* (the wh-determiner *which* followed by its NP complement *boys*) or *with which boys*, respectively.

In the literature on wh-displacement, after Ross's work, the term pied-piping was first employed particularly in the sense of PP pied-piping, because of those cases where pied-piping could be optional, as in English when a wh-element is the complement of a preposition. In the MP framework, however, Chomsky (1995b, 1998, 2001b) recovers the original concept of pied-piping given by Ross assuming that pied-piping is, in its essence, movement and copy. Chomsky (1995b: 262) proposes that "whatever "extra baggage" is required for convergence involves a kind of "generalized pied-piping" [and] (...) bare output conditions should determine just what is carried along (...)". In fact, Chomsky (2001b: 10) assumes that Move is a composite operation formed by Agree/pied-piping/Merge.

In this dissertation, and for the sake of exposition, I will only refer to PP pied-piping, since this is the specific kind of pied-piping that is relevant for the PSST strategy.

Moreover, Chomsky (1995b) considers that PP pied-piping and preposition stranding should be in complementary distribution. However, languages tend to allow both alternatively, as in (82) for CVC, or even in English, as (83) illustrates.

- (82) a. [PP Ku ki mininas]_i ki bu papia [~~ku ki mininas~~]_i na festa?
 with which girls that 2SG talk(PFV) in party
 'With which girls did you talk at the party?'

- b. [DP Ki mininas]_i ki bu papia ku-[~~e~~]_i na festa?
 which girls that 2SG talk(PFV) with-3SG in party
 'Which girls did you talk to at the party?'

- (83) a. [PP With which knife]_i did you extract that precious English
 stone [PP ~~with which~~ knife]_i?
 b. [DP Which knife]_i did you extract that precious
 stone [PP with [DP ~~which~~ knife]_i]?

I am assuming that the (b.) sentences in (82) and (83) are varieties of a general process of Preposition Stranding: in CVC, the complement of the preposition *ku* ‘with’ is phonetically overt (*el*), and, in English, the complement of the preposition *with* is null²⁸.

In what concerns these two processes, and focusing on the variant of Preposition Stranding that spells out the trace (PSST), we may suggest that languages must be specified as in (84):

- | | | |
|------|---|----------|
| (84) | a. PP pied-piping: | Yes / No |
| | b. Preposition stranding + null gap: | Yes / No |
| | c. Preposition stranding + spelled out gap: | Yes / No |

When combined, the properties in (84) allow us to divide languages into the groups in table 1.

²⁸ Note that this option is not available in CVC, as it was shown in chap. 4 (section 4.2.1.2.) for relative clauses, and in (i) for wh-questions.

(i) **[Ki mudjeris]_i ki Zé papia [PP/OBL ku [~~ki mudjeris~~]_i]*?
 which women that Zé talk(PFV) with
 ‘Which women did Zé talk with?’

Table 1. Types of languages according to PP pied-piping and P-stranding

Properties Types	PP pied-piping	P-stranding + null gap	P-stranding + spelled out gap	Languages (examples)
I	Yes	No	No	EP, Russian, Slavic, Irish, (German and Dutch ²⁹)
II	Yes	Yes	No	English ³⁰
III	Yes	No	Yes	CVC, Papiamentu

If the picture in table 1. will be confirmed by the behavior of other languages, it seems that the strategy of ‘pure stranding’ (P-stranding + a null gap) is in complementary distribution with P-stranding + spelled out gap, i.e. languages cannot alternate between one or the other, while they can choose to pied pipe or to leave a preposition stranded (with or without a spelled out trace).

The first conclusion drawn out from CVC data (cf. (82)) is that PSST (P-stranding + spelled out gap, in present terms) does not seem to be activated as the result of a rejection of PP pied-piping. But this may be a misleading conclusion. In fact, I will assume that one of the possible explanations for CVC alternation between PP pied-piping and PSST is the diglossia situation that Cape Verde lives in, with the co-existence of Portuguese (the official language) and CVC (the mother tongue) – see D. Duarte (2003) for a developed discussion on this topic³¹. The diglossia may account for

²⁹ Some authors suggest that German and Dutch do not also allow preposition stranding because they do not allow movement of a full DP complement of a P^o to a position outside of PP (see Van Reimsdijk (1978a), Hoekstra (1995), Abels (2003), a.o.). Nevertheless, there are some cases of apparent P-stranding in those languages, as in (i), for German.

(i) Wo hast du mit gerechnet?
where have you with counted
'What did you count on?'
(from Abels, 2003: 194)

German

This kind of discussion is not my primary concern, though, and therefore I will not pursue it.

³⁰ Although English exhibits PP pied-piping, this strategy does not seem to be the ‘natural’ one in colloquial speech. In fact, the possibility of pied-piping a PP in English may be a residue of the Romance languages. For instance, Kayne (1994: 25) assumes that “In ([his]) colloquial English, the pied-piping of a prepositional phrase in interrogatives (and relatives) is not possible”. Moreover, Kayne (ibid.) suggests that English rejection to PP-pied-piping “is presumably to be related to the fact that it does allow preposition stranding”.

³¹ See also note 26 above. Note first that all my informants of the elicited data were undergraduate or even graduate students and, therefore, their proficiency in Portuguese was (relatively) good. Second, some of the elder and uneducated informants who allowed me to record spontaneous speech of CVC did not produce any wh-questions formed by the PSST strategy (indeed, they have not produced wh-questions in general). In those recording sessions, the task I have asked my informants to do was to talk about their

the co-occurrence of PP pied-piping and P-stranding + spelled out gap, but it does not explain why there is a preference for the PSST strategy in CVC wh-questions. Recall also that CVC does not allow for PP pied-piping in relative clauses (as we will discuss later), exhibiting a resumptive pronoun strategy in these constructions³².

Assuming, within the spirit of the MP, that categories move overtly to check its features against another category, i.e. to establish a relation of Agree, the question that comes to our mind is whether there is a feature that blocks PP pied-piping. Putting it in another way, why is there only movement of a wh-DP to SpecCP when a PP is questioned?

Watanabe (2006) proposes a ‘pied-piper’ feature (F(PP)), whose function is (i) to mark the category to be copied by pied-piping, and (ii) to reduce “the workload of the PF computation”, i.e. the F(PP) serves to determine “pronunciation of a chain before Spell-Out without forcing the computational system to handle phonological features directly in narrow syntax” (op. cit., p. 48). Accepting this, and following the Inclusiveness Condition (stated as in (85)), the pied-piper feature has to be assigned when the numeration is formed.

Inclusiveness condition

- (85) “No new objects are added in the course of computation apart from rearrangements of lexical properties” (Chomsky, 1995b: 228).

This means that the lexical items that enter the Numeration must come from the Lexicon with a set of formal features among which is the pied-piper, a solution that overloads somehow the computational system, because the category to be copied has to

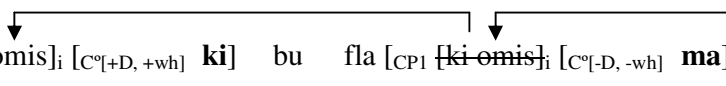
lives, their past experiences, and that was performed in a monologue speech. To overcome this flaw in data collection is an issue for the future research that I intend to conduct in Cape Verde.

³² Note also that in a substrate language as Wolof the strategy of PP pied-piping is optional in wh-questions (cf. (ib.)) and is impossible in relative clauses, as in (ii).

- | | | |
|------|---|---------------------|
| (i) | <p>a. Teg-na-ñu tééré bi ci taabal ji.
 put-na-3pl book the P table the
 ‘They put the book on the table’.</p> <p>b. (Ci) lu ñu teg tééré bi.
 P cl.u 3pl put book the
 ‘(At) what did they put the book?’
 (from Torrence, 2005: 133-134)</p> | <p><u>Wolof</u></p> |
| (ii) | <p>Gis-na-a (*ci) lu ñu teg tééré bi.
 see-na-1sg P cl.u 3pl put book the
 ‘I saw something on which they put the book.’
 (from Torrence, 2005: 135)</p> | <p><u>Wolof</u></p> |

be identified since the very first beginning of the derivation. Watanabe (2006) supports his view on data of Old Japanese, saying that the parallel between the loss of the focus particle *ka* and the loss of wh-movement in this language is an evidence for the fact that the pied-piper feature is sometimes realized as a focus particle.

I will argue that CVC seems to have a particle that behaves like Old Japanese *ka* expressing the pied-piper feature. Namely, the complementizer *ki* ‘that’ that obligatorily follows the wh-fronted elements in CVC seems to be that pied-piper. Nevertheless, it only allows for DP pied-piping and excludes PP pied-piping, since it is specified for [+D]. Particularly, *ki* being specified for [+D, +Wh] features, it can only attract wh-DPs. Considering (86) below, *ki omis* cannot survive in SpecCP₁ because it cannot check its [+D, +Wh] features against a [-D, -Wh] complementizer (*ma* ‘that’), and it goes up to the next SpecCP to reach its goal (see chap. 2, section 2.5.1.2. and 2.5.1.3., for a detailed explanation).

- (86)  ...
- [CP₂ [Ki omis]_i [C°₂ [+D, +wh] **ki**] bu fla [CP₁ [ki omis]_i [C°₁ [-D, -wh] **ma**]
 which men that 2SG say(PFV) that
 Maria ka ta badja [PP ku-[DP_i [+D, +wh] el]_i]?
 Maria NEG IPFV dance with-3SG
 Lit.: ‘Which men is that you said that Maria doesn’t dance with him?’
 ‘Which men did you say that Maria doesn’t dance with?’

It could be argued, however, that in (82a.) above (*Ku ki mininas ki bu papia na festa?*) C° is filled with *ki* and PP pied-piping is still applied. This is not a counterargument to the idea that *ki* is a pied-piper of wh-DPs exclusively. I have considered before the diglossia situation in Cape Verde partially responsible for the co-existence of PP pied-piping and P-stranding + spelled out gap. In the case of (82a.), a sentence involving PP pied-piping plus an overt C° with *ki*, I will assume that the *ki* occurring in it is different from the *ki* in (82b.). Particularly, both *ki* are superficially the same because of their morphophonological nature, but the *ki* in (82a.) is unspecified for the [±D] feature, corresponding to the Portuguese *é que* ‘is that’, while the *ki* in (82b.) is a form that evolved into a specialized function, i.e., being the complementizer of [+D] elements in CVC. For better understanding, this line of reasoning is schematized in (87).

- (87) a. $ki_{[\pm Wh, \pm D]} \rightarrow$ PP pied-piping (e.g. EP *é que*)
 b. $ki_{[\pm Wh, +D]} \rightarrow$ P-stranding (e.g. CVC)

The second conclusion drawn out from CVC data, and highlighted in table 1., is that P-stranding + null gap and P-stranding + spelled out gap are in complementary distribution in those languages that allow for P-stranding, as in English and CVC.

The claim is that this complementarity may indicate a difference in the nature of the prepositions involved in those processes. Let us explore the two assumptions in (88) for CVC.

Assumptions on the nature of Prepositions in CVC

- (88) A. Prepositions are incorporated by the verb, in the sense of Baker's (1988) theory.
 B. Prepositions cannot be incorporated by the verb³³.

Consider again sentence (11), repeated here as (89).

- (89) $[_{DP} Ki \ mininas]_i \ ki \ bu \ papia \ [_{PP/OBLNucI} ku-[el]_i] \ na \ festa?$
 which girls that 2SG talk(PFV) with-3SG in party
 Lit.: 'Which girls is that you talked with him in the party?'
 'Which girls did you talk to at the party?'

According to Baker's (1988) theory, lexical categories, such as prepositions, can be incorporated by other lexical heads, namely, by a verb. After being incorporated by a verb, the preposition and the verb form a complex derived verb that governs anything which was governed by the preposition before it became incorporated (cf. Government Transparency Corollary, Baker, 1988: 64). In languages that allow for P-stranding with null gap strategy in wh-questions, like English, the verb can incorporate the preposition since they both assign the same Objective Case to their complements, as the clitic versus nonclitic form of the pronouns in (90) show³⁴; this allows the null gap in sentences like (91) to be formally licensed, being head governed by a [+V] head (through Government Transparency Corollary).

³³ Or, in a more recent formulation, little *v* cannot attract prepositions.

³⁴ See also chapter 2, section 2.3.1., on this topic.

- (90) a. Mary [_V loves] [_{DP/DO} him].
 b. Mary talks [_P with [_{DP} him]].

- (91) [Which boys]_i did you [_V talk to] [_{DP} ~~which boys~~]_i?
 head-governs
 ↓

Assuming (88A.) to apply in CVC, we could think that the preposition *ku* ‘with’ in (89) might be reanalyzed as part of the verb *papia* ‘talk’. In that case, the complement of the preposition (*ki mininas* ‘which girls’) would become the complement of the complex derived verb *papia ku* and could subsequently move to SpecCP to check its [+Wh] feature against C°.

However, Baker’s preposition incorporation approach must be rejected based on two facts. First, Baker’s theory does not account straightforwardly for the presence of *el* in the complement position of the preposition possibly incorporated by the verb *papia*. If we follow Pratas’ (2004: 60-61) claim that (direct or indirect) object pronouns have the same form in CVC, varying between clitic and nonclitic forms only when the verb is perfective or imperfective (see (92a. and b.), respectively), then, CVC should belong to the group of languages that behave like English in (90)³⁵.

- (92) a. Djon odja-I / fla-I.
 Djon see(PFV)-3SG say(PFV)-3SG
 ‘Djon saw him / told him.’
 b. Djon odjaba / flaba el.
 Djon see(PFV).ba say(PFV).ba 3SG
 ‘Djon had seen / told him.’

But CVC seems to share some properties with EP. In fact, the pronominal forms that are selected by a preposition in this language cannot be the same as the ones governed by verbs (confront (93) with (94), respectively).

³⁵ See also chap. 2., section 2.3.1.

- (93) a. Djon papia **ku-el** / ***ku-l**.
 Djon talk(PFV) with-3SG
 ‘Djon talked with him.’
- b. Maria gosta **d’el** / ***di-l**.
 Maria like(IPFV) of-3SG
 ‘Maria likes him.’
- c. Zé fase kel brinkadera-li **pa el** / ***pa-l**.
 Zé do(PFV) DEM toy-PROX for 3SG
 ‘Zé did this toy for him.’
- (94) a. Djon **fase-l** / ***fase el**.
 Djon do(PFV)-3SG
 ‘Djon did it.’
- b. Maria **atxa-l** / ***atxa el**.
 Maria find(PFV)-3SG
 ‘Maria found him/it.’

Observing (93)-(94), it seems that prepositions select for a nonclitic form while verbs occur with clitic pronouns. However, to use the clitic status of pronouns to argue against preposition incorporation in CVC may be deceivable, since the host of object clitics in CVC must be fully specified as [+V], and therefore the complements of prepositions cannot be clitic pronouns but XPs. I am assuming, thus, that verbs and prepositions have different properties in CVC and that one cannot be incorporated by the other.

Nevertheless, I have another argument against Baker’s preposition incorporation approach. If we assume that the PSST strategy is some sort of Preposition Stranding strategy and if it is derived in case we have incorporation, then, Baker’s analysis does not explain extractions of adjuncts with the PSST strategy in CVC. According to Baker, the incorporation of non-theta marked constituents is ruled out. Particularly, being subject to the Head Movement Constraint, which states that a lexical item such as a verb may only incorporate those words which it properly governs, Baker’s theory rules out

sentences in which the incorporation by the verb of a non-theta marked preposition should take place, because that preposition constitutes a barrier to government (see (57) above). Baker (1988) claims further that there are several types of incorporation and some of them may be realized in the form of Reanalysis (e.g. this accounts for English sentences like *this bed has been slept in*, where the preposition is reanalyzed as part of the verb, without actually being incorporated). Then, the theory predicts that in a sentence like (95) the preposition *ku* ‘with’ cannot be incorporated by the verb *kebra* ‘to break’, because the verb does not govern the preposition, and *ku* has to be reanalyzed as part of the verb, in order to yield a good derivation.

- (95) [DP Kusé]_i ki bu kebra karu [PP/OBL_{Access} ku-[el]_i]?
 Thing that 2SG break(PFV) car with-3SG
 Lit.: ‘What is that you broke the car with it?’
 ‘What did you break the car with?’

However, Baker’s theory does not also account for the English cases of P-stranding with a null gap applied to a non-theta marked phrase (...*break the car with*), as the grammaticality of the translation of sentence (95) shows.

It was shown why assumption (88A.) does not account for CVC data, and we therefore suggest that the assumption (88B.) may explain the PSST strategy in CVC, i.e. prepositions cannot be incorporated by the verb in CVC because they assign distinct Cases to their complements. In this language, prepositions cannot be incorporated by the verb and are not attracted to SpecCP, therefore, they must have a spelled out object for the derivation to survive.

Having considered the nature of the ‘defective copy’ present in PSST constructions of CVC, in the next sections we will see how the copy theory of movement (Chomsky, 1995b) and the Copy + Merge theory of movement (Nunes, 2004) account for the derivations that end up with a head plus a defective spelled out copy at the foot of the chain.

5.2.3. How does the Copy Theory of Movement (Chomsky, 1995b) account for PSST?

The copy theory of movement that accounts for the ‘displacement property’ of languages in the MP (Chomsky, 1995b and thereafter) is a revival or a restatement of Chomsky’s (1973 and 1977) conditions on (wh-)movement. In its essence, the copy theory of movement treats traces as copies of the displaced items. When the movement is overt, i.e. before Spell-Out, these copies have to be deleted in the phonological component but remain available for interpretation at the conceptual-intentional system (i.e. LF).

In minimalist terms, the operation Move is now a compound procedure that operates as follows:

Move in MP

- (100) a. Copy an element α from Σ
b. Merge α with K
c. Form chain
d. Delete α
(adapted from Chomsky, 1995b: 250)

The discontinuous object [$\text{wh}_{[+PL]} \dots \text{el}$], i.e. the output of the PSST strategy in CVC, seems to challenge some MP principles, namely those of economy of derivations, since their main goal is that there would be no superfluous elements³⁶.

Sentences like the one in (89) above (*ki mininas ki bu papia ku-el na festa?* ‘which girls did you talk with him at the party?’) exhibit an apparently superfluous element *el* at the foot of the chain and, moreover, this element does not appear in the same form of its head (e.g. *ki mininas*).

Assuming that “chains are not introduced by selection from the lexicon or by Merge” (Chomsky, 1995b: 316), and that the basic operation is Form Chain³⁷, if we take

³⁶ In fact, Chomsky (1995b: 145) says that the larger a derivation the more costly it is, “But “cost”, has a more subtle meaning: UG principles are less costly than language-specific rules that are contingent upon parameter choices”.

³⁷ According to Chomsky (1995b: 181), this operation Form Chain would undo the paradox between shortest move and fewest steps in a derivation, two natural notions of economy.

a sentence like (101) and apply Form Chain to structure (102a.) to derive (102b.), obviating the steps in (100), we would obtain chain (102c.):

- (101) [Ki mininas]_i ki bu fla ma
 Which girls that 2SG say(PFV) that
 Djon papia [ku-[el]_i] na festa?
 Djon talk(PFV) with-3SG in party
 Lit.: ‘Which girls is that you said that Djon talked with him in the party?’

- (102) a. Bu fla [_{CP} ma [_{TP} Djon papia ku ki mininas na festa]].
 b. [_{CP2} [Ki mininas]ⁱ ki bu fla [_{CP1} ~~[ki mininas]ⁱ~~ ma [_{TP} Djon papia ku
~~[ki mininas]ⁱ~~ na festa]]].
 c. CH = (*ki mininas*, *t'*, *t*)

In the derivation of (102), the successive-cyclic wh-movement proceeds as follows: the phrase $\alpha = ki\ mininas$ is copied from object K = [Djon papia ku ki mininas na festa] and merged with [bu fla ma], yielding [ki mininas ki bu fla ma Djon papia ku na festa]. The derivation in (102) crashes, though, since the foot of the chain is not properly head-governed by the preposition *ku*, a [-V] category (see (63) above), violating ECP. The intended derivation for (102a.) has to be the one in (103):

- (103) a. [_{CP2} [Ki mininas]ⁱ ki bu fla [_{CP1} ~~[ki mininas]ⁱ~~ ma [_{TP} Djon papia ku
 el^i na festa]]].
 b. CH = (*ki mininas*, *t'*, *el*)

However, the wh-chain in (103b.) is excluded under MP assumptions, raising two particular problems: (i) the foot of this chain is spelled out in the form of *el*, when it should be deleted, i.e. not ‘visible’ at the interface (cf. (100d.)); and (ii) the spelled out foot is not a (perfect) copy of the head, which apparently violates the Inclusiveness Condition, which precludes new syntactic objects to be included in the course of computation (cf. (85) above).

(104) [_{CP} [Mit wem] glaubst du [_{CP} [mit wem] Hans
with whom think you with whom Hans
spricht [~~mit wem~~]]]? German
talks
‘With whom do you think Hans is talking?’
(adapted from McDaniel, 1986, ap. Nunes, 2004: 13)

³⁸ For a profound discussion of the advantages and theoretical problems of the copy theory, see Nunes (2004) and Donati (2006), *inter alia*.

⁴⁰ See footnote 10 above and example (43) in the text, repeated here as (i), where *el* cannot be interpreted from a possible DP antecedent occurring out of its local domain, but only from the fronted *wh*-DP, proving that *el* behaves like a syntactic variable and not like a ‘pure’ pronoun.

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To find the answer to this question, we have to take into consideration that Chomsky (1995b) assumes (wh-)chains to be subject to several conditions, namely those in (105).

(105) CH = (α , t(α)) is subject to

- (i) c-command condition (“ α must c-command its trace, so that there cannot be an operation that lowers α or moves it “sideways””, op. cit., p. 253);
- (ii) uniformity condition (“a chain is uniform with regard to phrase structure status”, ibd.);
- (iii) Move is a Last Resort condition.

Following (105), the chain (*ki mininas*, *t'*, *el*) of (103b.) seems to satisfy all the requirements, for *ki mininas* c-commands *el*, the chain is uniform, and it is obtained through movement as a Last Resort operation, since *ki mininas* needs to check its features against C°.

The question on why *el* spells out *ki mininas* keeps unanswered, though. Let us see if Nunes’ (2004) Copy + Merge theory of movement accounts for this kind of chain and what it implies.

5.2.4. How does the Copy + Merge Theory of Movement (Nunes, 2004) account for PSST?

Focusing on the requirement of PF deletion of the lower copies, formulated in Chomsky’s Copy Theory of Movement, Nunes (2004) argues for what he calls the null hypothesis, which states that every link of a chain (whether head or tail) can be phonetically spelled out, as in German (cf. (104) above) and Romani (cf. (106)), languages in which the highest copy and an intermediate copy can be spelled out.

- (106) [_{CP} [Kas]_i misline [_{CP} [kas]_i o Demiri dikhlâ [~~kas~~]_i]]? Romani
 whom you-think whom Demir saw
 ‘Who do you think Demir saw?’
 (adapted from McDaniel, 1986, ap. Nunes, 2004: 14)

However, the theory that Nunes (2004) develops, and that allegedly solves the problems of Chomsky's copy theory, for it assumes that there is nothing within the lower copies that prevents them from being pronounced (the null hypothesis), still excludes the possibility of spelling out the tail of the chain, in order to satisfy linearization requirements, such as Chain Reduction in (107).

Chain Reduction

(107) "Delete the minimal number of constituents of a nontrivial CH that suffices for CH to be mapped into a linear order in accordance with the LCA".

(Nunes, 2004: 27)

The Copy + Merge theory does not take Move as a primitive operation of the computational system and relies on four independent operations, similar to Chomsky (1995b). The main difference with respect to Move in the MP (cf. (100)) is the substitution of 'delete α ' for 'chain reduction'⁴¹, i.e. the system stops deleting the lower copies in a blindly fashion and starts deleting them driven by linear order requirements, employing deletion as little as possible.

Move in Copy + Merge theory

- (108) a. Copy
b. Merge
c. Form Chain
d. Chain Reduction

The issue here is to evaluate (108) consequences for chains that result from a PSST strategy, such as (*ki mininas, t', el*), i.e. to see what happens when the lowest link of an A'-chain is spelled out.

Nunes (2004) tries to theoretically motivate, through its 'chain reduction' operation, the minimalist assumption that every link of a (A'-)chain should be deleted except for the head of the chain, in order for a derivation to converge. In his Copy + Merge framework, the derivation of a sentence like (109) would proceed as in (110), yielding the wanted PF output in (111d.):

⁴¹ Nunes (2004) states, nevertheless, several 'conceptual inadequacies' of Chomsky's (1995b) copy theory of movement.

- (109) Ki librus ki bu fla ma Maria kunpra?
 which books that 2SG say(PFV) that Maria buy
 ‘Which books did you say that Maria bought?’

- (110) a. $M = [_{CP2} \text{ ki } [_{TP} \text{ bu } [_{T'} T [_{VP} \text{ fla}] [_{CP1} \text{ ma } [_{TP} \text{ Maria } [_{T'} T [_{VP} \text{ kunpra } [_{DP} \text{ ki librus}]]]]]]]]$

b. *Copy*

$M = [_{CP2} \text{ ki } [_{TP} \text{ bu } [_{T'} T [_{VP} \text{ fla}] [_{CP1} \text{ ma } [_{TP} \text{ Maria } [_{T'} T [_{VP} \text{ kunpra } [_{DP} \text{ ki librus}]^i]]]]]]]]$

c. *Merge*

$L = \text{ki librus}^i$

d. *Form Chain*

$M = [_{CP2} \text{ Ki librus}^i [_{C'} \text{ ki } [_{TP} \text{ bu } [_{T'} T [_{VP} \text{ fla}] [_{CP1} [\text{ki librus}]^i [_{C'} \text{ ma } [_{TP} \text{ Maria } [_{T'} T [_{VP} \text{ kunpra } [_{DP} \text{ ki librus}]^i]]]]]]]]$

e. *Chain Reduction*

$M = [_{CP2} \text{ Ki librus}^i [_{C'} \text{ ki } [_{TP} \text{ bu } [_{T'} T [_{VP} \text{ fla}] [_{CP1} [\text{~~ki librus~~}]^i [_{C'} \text{ ma } [_{TP} \text{ Maria } [_{T'} T [_{VP} \text{ kunpra } [_{DP} \text{ ~~ki librus~~}]^i]]]]]]]]$

- (111) a. *Ki librus ki bu fla ki librus ma Maria kunpra?
 b. *Ki librus ki bu fla ma Maria kunpra ki librus?
 c. *Ki librus ki bu fla ki librus ma Maria kunpra ki librus?
 d. Ki librus ki bu fla ma Maria kunpra?

According to this theory, the highest link of the chain (the head *ki librus*) is involved in more checking relations, and the operation of Formal Features (FF)-Elimination, defined as in (112), applies fewer times to the head of the chain than to the lower links.

FF-Elimination

- (112) “Given the sequence of pairs $\sigma = \langle (F, P)_1, (F, P)_2, \dots, (F, P)_n \rangle$ such that σ is the output of Linearize, F is a set of formal features, and P is a set of phonological features, delete the minimal number of features of each set of formal features in order for σ to satisfy Full Interpretation at PF.”

(Nunes, id., p. 31)

In (111d.), the nontrivial chain is formed by $\langle (\{3, PL, +wh, +Q\}, \{/kilibrus/\})_1, (\{3, PL, +wh, +Q\}, \{/kilibrus/\})_2, (\{3, PL, +wh, +Q\}, \{/kilibrus/\})_3 \rangle$, being $(\{3, PL, +wh, +Q\}, \{/kilibrus/\})_1$ the good candidate for escaping the operation Chain Reduction and to be phonetically overt, because it checks the [+wh, +Q] features against CP₂, since CP₁ is [-wh, -Q].

Nunes (2004) argues that the system knows what to delete and achieves the expected result in (111d.) applying the operation Linearize as stated in (113).

Linearize

- (113) “[It] maps a given syntactic structure into a sequence of terminals, in compliance with the LCA” (Nunes, op. cit., p. 24).

The deletion of the lower links in (110) is then forced by the need of the chain to be linearized according to the Linear Correspondence Axiom (in (114)), which rules all syntactic representations and which Nunes & Uriagereka (2000, ap. Nunes, 2004: 119) simplified as stated in (115).

Linear Correspondence Axiom

- (114) “ $d(A)$ is a linear ordering of T^* ”⁴²
(Kayne, 1994: 6).

Linear Correspondence Axiom

- (115) A lexical item α precedes a lexical item β iff α asymmetrically c-commands β .

⁴² d is a dominance relation between non-terminal and terminal nodes. A is the maximal set of all ordered pairs of non-terminal nodes that asymmetrically c-command each other. Therefore, $d(A)$ is the linear order of the set of terminal nodes that A has in its domain.

This means that the LCA introduces the notion of ‘asymmetry’ to the classic c-command relation⁴³. The LCA forces deletion of the lower links because, if the links of a chain are the same element, no asymmetrical c-command between this element and other elements intervening between the different links is ensured. As Nunes (2004: 17) puts it, “if the links of a chain are in a sense the same element (...), any material intervening between two links of a given chain asymmetrically c-commands and is asymmetrically c-commanded by the same element”.

So, sentence (111b.) – **Ki librus ki bu fla ma Maria kunpra ki librus?* –, for instance, is ruled out because *ki librus* in SpecCP₂ c-commands the verb *kunpra* and *kunpra* c-commands its object *ki librus*. As the verb *kunpra* precedes and is preceded by *ki librus*, the derivation violates the LCA.

However, if we take a sentence like (116) and apply to it the composite operation in (108), we would end up with derivation (117), yielding the undesirable PF output (118):

- (116) [DP Ki skolas]_i ki Maria fla
 which schools that Maria say(PFV)
 ma bu ta trabadja [PP n’[el]_i]?
 that 2SG IPFV work in.3SG
 Lit.: ‘Which schools is that Maria said that you work in it?’
 ‘Which schools did Maria say that you work in?’

- (117) a. M = [CP₂ ki [TP Maria [T’ T [VP fla [CP₁ [C’ ma [TP bu [T’ ta [VP trabadja [PP na ki skolas]]]]]]]]]]]

b. *Copy*

M = [CP₂ ki [TP Maria [T’ T [VP fla [CP₁ [C’ ma [TP bu [T’ ta [VP trabadja [PP na ki skolasⁱ]]]]]]]]]]]

c. *Merge*

L = ki skolasⁱ

⁴³ Chomsky (1986a: 8) proposes that we have a c-command relation between α and β if and only if:

C-command relation

(i) “ α does not dominate β and every γ that dominates α dominates β ”.

As (116) shows, the good output for this kind of wh-question in CVC has to spell out the foot of the chain in the form of *el*, what constitutes, at least apparently, an asymmetry violation. Thus, we have the same problem of (111b.) above: the P_{na} precedes the lower link *el*, which has the same referents as *ki skolas*, and is preceded by the upper link *ki skolas*; putting it differently, in some sense *ki skolas* c-commands and is c-commanded by P_{na} .

This means that Nunes' proposal can only account for the spell out of copies that adjoined to an X^0 category, that is, a head. The Copy + Merge theory discards, thus, the possibility of spelling out the lower copy, if it is an XP.

⁴⁵ According to Halle & Marantz (1993: 116), the operation Fusion "takes two terminal nodes that are sisters under a single category node and fuses them into a single terminal node". This means that the newly formed category can only be expressed by one vocabulary item.

even if *ki skolas* and *na* could be sister nodes, this would result in a crashing derivation, because the output of the morphological reanalysis of *#[na [ki skolas]]#* would yield the sentence **ki skolas ki Maria fla ma bu ta trabadja na ki skolas?* ‘which schools is that Maria said that you work in which schools?’, an utterance never found in the language.

Summarizing: although I find Nunes’ (2004) framework appealing in several aspects, it does not provide an adequate account for the CVC data derived by the PSST strategy.

Considering Chomsky’s and Nunes’ assumptions, I will now try to extend those theories in order to legitimate the occurrence of *el* at the foot position of a nontrivial chain as (*ki skolas*, ~~*ki skolas*~~, *el*).

5.2.5. The Defective Copy Theory of Movement

Having reviewed Chomsky’s and Nunes’ Copy Theories of Movement, and having concluded that none of them entirely accounts for the PSST strategy of CVC wh-questions (in fact, they even exclude it), the main goal now is to accommodate those theories to the CVC data under discussion.

Before proceeding, let us summarize our achievings so far on the PSST strategy in CVC:

- (119) a. It is an alternative strategy to PP pied-piping and P-chopping in wh-questions (see chap. 3) and also to resumption in relative clauses (see chap. 4);
- b. It is not a subtype of resumption, because it does not occur in syntactic island contexts, and *el* behaves like a variable (a wh-gap) licensing parasitic gaps and being sensitive to Strong Crossover effects;
- c. The foot of the nontrivial chain is always an element that resembles a 3rd person singular pronoun – *el* – which is not a ‘true’ pronoun because it does not give rise to the same reference effects;
- d. PSST involves wh-movement, because both long and successive-cyclic movement is sensitive to strong and weak islands;
- e. PSST imposes strong requirements on locality conditions, because the strategy is sensitive to long movement in weak islands;
- f. PSST excludes P-stranding + null gap in CVC because the language does not allow for preposition incorporation in the verb.

- g. PSST excludes PP pied-piping because CVC displays an ambiguous C° (*ki* [+D, ±Q, ±Wh, ...]) that requires DP movement to SpecDP.

Considering all the facts on the PSST strategy in CVC in (119), we have to provide the answers to the questions left open:

- (120) a. Why is the foot of a nontrivial chain morphophonologically expressed and why is it similar to a 3rd person singular pronoun (*el*)?
 b. If we assume Nunes' Copy + Merge Theory, how can PSST chains avoid an LCA violation?

The facts tell us that the discontinuous object [*wh*_[+PL] ... *el*] resembles, at first sight, a structure already described in the literature and named 'resumptive chain'⁴⁶. Resumptive chains have received two main opposite analyses⁴⁷: a non-(*wh*-)movement approach (e.g. Engdahl, 1985), and a (*wh*-)movement view (e.g. Boeckx, 2003a⁴⁸). As table 2. presents, the research developed in this decade on resumptive constructions of several languages has shown that the phenomenon of resumption is not consensual anymore.

⁴⁶ On resumptive constructions, see, among many others, Muysken (1980) for Papiamentu, Quintero (1984) for Spanish, Engdahl (1985) for Swedish, Biloa (1989) for Tuki, McCloskey (1990) for Irish, Shlonsky (1992) for Hebrew, Alexandre (2000) for EP, Aoun (2000) for Lebanese Arabic, Hendrick (2005) for Tongan, Szcegielniak (2005) for Polish, Aikaterini (2006) for Modern Greek, and Salzmann (2006) for Zurich German.

⁴⁷ Aoun, Choueri and Hornstein (2001) represent, moreover, a third kind of mixed approach, arguing that Lebanese Arabic distinguishes between 'true resumption', derived by Binding and applied inside syntactic islands, and 'apparent resumption', derived by Move.

⁴⁸ Demirdache (1991: 49) also considers that "a resumptive pronoun in a restrictive relative, just like any *wh*-pronoun in a restrictive relative, is an *operator-variable chain created by wh-movement*", but her resumptive chain is created at LF, and not before Spell-Out, as Boeckx (2003a) suggests.

Table 2. Recent theoretical views on resumptive constructions⁴⁹

		Syntactic contexts	
		Outside islands	Inside islands
Wh-movement	Yes	Aoun et al. (2001), for Lebanese Arabic	
		Boeckx (2003), for Irish, Hebrew, Selayarese ⁵⁰ , a.o.	Boeckx (2003), for Irish, Hebrew, Selayarese, a.o.
		McCloskey (2006), for Irish	
	No	Salzmann (2006), for Zurich German	Salzmann (2006), for Zurich German
			Aoun et al. (2001), for Lebanese Arabic
			McCloskey (2006), for Irish
		Rouveret (2008), for Welsh	Rouveret (2008), for Welsh

Basically, the classic non-movement approach of resumption argues for a kind of Last Resort device, aiming at rendering acceptable linguistic outputs. In this perspective, the wh-Operator is base-generated in SpecCP position, c-commanding from there the resumptive pronoun and circumventing syntactic island effects.

In the past few years and mainly based on similarities with non-resumptive wh-chains, it has been argued that resumptive chains can also involve wh-movement⁵¹. As this kind of approach was not addressed so far in this dissertation, in the next section I will consider the impacts of assuming such an analysis for PSST.

5.2.5.1. How does the Stranding Analysis of Resumption (Boeckx, 2003a) account for PSST?

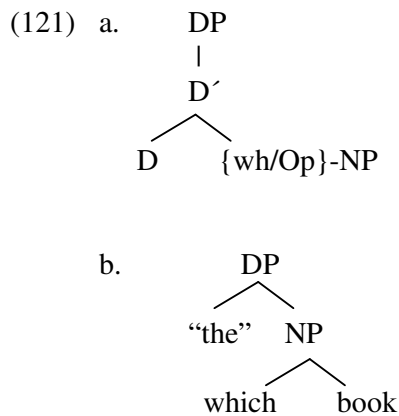
Contrary to the classic perspective of resumption, Boeckx (2003a: 25) proposes an analysis in which “RPs [Resumptive Pronouns] are stranded portions of the moved

⁴⁹ The poles of these formal approaches are represented by Boeckx (2003a) and Salzmann (2006), who stand for a theory of resumption with wh-movement all over, i.e. outside and inside syntactic islands; and by Rouveret (2008), who proposes that resumption is never the result of a Move operation.

⁵⁰ Selayarese is an Austronesian language spoken on the island of Selayar, Indonesia.

⁵¹ See also, e.g., works from Hendrick (2005) for Tongan, Salzmann (2005) for German and Dutch, Alber (2006) for Tyrolean in an OT framework and Asudeh (2007) for Swedish, Vata and Gbadi.

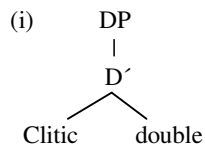
phrases they ‘associate with’”, suggesting the DP structure in (121a.) to be at the base of a resumptive chain (id., p. 28)⁵², exemplified in (121b.) for a D-linked wh-phrase:



(from Boeckx, 2003a: 29⁵³)

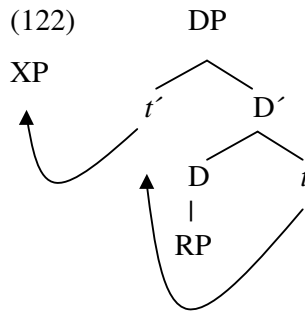
Notably, the author assumes that (i) a resumptive pronoun is a distinct syntactic category from what ends up as its antecedent (specifically its complement in (121) above), and that (ii) determiners and (resumptive) pronouns occupy the same D position. According to his proposal, resumptive pronouns are left stranded, yielding a subextraction configuration like the one in (122), and “stranding (i.e., resumption) takes place due to a PUC [Principle of Unambiguous Chain⁵⁴] violation that requires overt Case/ Φ -feature checking and overt Operator movement” (id., p. 37).

⁵² Boeckx (op. cit, p. 35) remarks that the structure put forward for resumption is also similar to the structure of clitic doubling advanced by Cechetto (2000), as in (i):



⁵³ The author explains that this structure, originally given by Rullmann and Beck (1998), is similar to the one he provides in (121a.). Based on semantic arguments, Rullmann and Beck (ap. Boeckx, 2003: 29) argue that “the” in (121b.) is a null definite determiner whose function is to assign a definite/specific character to the D-linked wh-elements.

⁵⁴ Boeckx (2003a: 13) says that the major proposal of his work is this principle, which states that “at the interfaces a chain must be defined unambiguously. (...) I take a chain to be unambiguous if it contains at most one strong position (indicated by *)”. A ‘strong position’ is understood by Boeckx as the one occupied by an element α with an occurrence of the EPP-property, “with the instruction for PF to pronounce α in that context”.



(from Boeckx, 2003a: 56)

Moreover, Boeckx discards resumptive pronouns (in)sensitivity to islands and bases his approach on “some solid cross-linguistic generalizations about RPs” (id., p. 19), as those in (123):

- (123) (i) “RPs appear to trigger a specific reading on the antecedent, and to be compatible with D-linked interrogatives only”.
- (ii) “many properties of resumption can be shown to depend on the complementizer system of the language, and not on the properties of the pronouns themselves”.
- (iii) “a vast majority of the languages that make use of RPs isolate the subject position”, i.e. some languages, as Vata, allow for resumptive pronouns only in Subject position, while in other languages, as Irish and Hebrew, resumptive pronouns are excluded from the Subject position.

Only one of the above mentioned ‘solid cross-linguistic generalizations’ is observable in CVC, namely, the fact that the occurrence of resumptive pronouns depends on some specific kind of complementizer and not on the properties of the wh-pronouns themselves⁵⁵. In (124) we can see that a wh-pronoun like *kantu* ‘how many/much’ allows for a resumptive pronoun, as long as C^0 is filled with *ki* ‘that’ (example a.).

- (124) a. [Kantu algen]_i ki bu dividi kel bolu-li pa-[el]_i?
 how.many someone that 2SG split(PFV) DEM cake-PROX for-3SG
 Lit.: ‘How many people did you share this cake with him?’

⁵⁵ On the system of complementizers in CVC, see chap. 2, section 2.5., of this dissertation.

b. *[Kantu algen]_i bu dividi kel bolu-li pa-[e]_i?

c. [pp Ku kantu algen]_i Ø bu divide
 with how.many someone 2SG split(PFV)
 kel bolu-li {ku kantu algen}_i?
 DEM cake-PROX
 Lit.: ‘With how many people did you share this cake?’

Note still that in CVC the PSST strategy (or resumption, in Boeckx’s terms) occurs in questions with non-D-linked wh-phrases, not triggering a specific reading on the antecedent (cf. (125)), contrary to Boeckx (2003a), since he assumes that “the D-linking restriction on resumption in interrogatives is one of the robust generalizations one finds in the domain of resumption”, as Lebanese Arabic illustrates in (126b.).

(125) [Kusé]_i ki bu kebra karu ku-[e]_i?
 thing that 2SG break(PFV) car with-3SG/3PL
 Lit.: ‘What is that you broke the car with it?’
 ‘What did you break the car with?’

(126) a. ?ayya kteeb ftarayt-i. Lebanese Arabic
 which book bought.2SG-it
 ‘Which book did you buy.’
 b. *fu ftarayt-i.
 what bought.2SG-it
 ‘What did you buy.’
 (Aoun and Choueiri, ap. Boeckx, 2003a: 22)

Furthermore, CVC does not isolate the subject position, because PSST only occurs with wh-PPs, as in (127). See also the ungrammaticality of the strategy with subject or object wh-questions, as in (128) and (129), respectively.

- (127) [DP Ki mininas]_i ki bu papia [PP/OBLNucI ku-[el]_i] na festa?
 which girls that 2SG talk(PFV) with-3SG in party
 Lit.: ‘Which girls is that you talked with him at the party?’
 ‘Which girls did you talk to at the party?’

- (128) N ka sabe [ki mudjeris]_i ki
 1SG NEG know(IPFV) which women that
 *[DP/SBJ e]_i fase kel katxupa sabi.
 3SG do(PFV) DEM katxupa good
 Lit.: ‘I don’t know which women is that she did this good katxupa.’
 ‘I don’t know which women did this fantastic food.’

- (129) a. Nu purgunta-u [ki librus]_i ki Djon kunpra-*[DP/DO I]_i.
 1PL ask(PFV)-2SG which books that Djon buy(PFV)-3SG
 Lit.: ‘*We asked you which books is that Djon bought it.’
 ‘We asked you which books Djon bought.’

- b. [Ki mininus]_i ki nhos kunpra-*[DP/OBJ1 I]_i un sukrinha?
 which boys that 2PL buy(PFV)-3SG a sweat
 Lit.: ‘Which boys is that you bought him sweats?’
 ‘Which boys did you buy sweats to?’

- c. [Ki librus]_i ki bu da-(*[DP/OBJ2 I]_i) Maria (*[DP/OBJ2 el]_i)?
 which books that 2SG give(PFV)-3SG Maria 3SG
 Lit.: ‘Which books is that you gave Maria it?’
 ‘Which books did you give Mary?’

Boeckx (2003a) remarks that another aspect to take into consideration in this kind of structures is the non-agreement facts between the foot and the head of the chain. Usually, in languages that have overt case morphology, it is Case non-agreement that is given as an example, as in (130) for Standard Arabic, where the NOM wh-pronoun *?ayy-u* ‘which’ does not agree with the ACC resumptive pronoun *hu* ‘him’,⁵⁶.

⁵⁶ This Case mismatching between the head and the foot of a chain exemplified by Standard Arabic cannot be taken against Merchant’s (2004) generalization, in (i).

- (130) [ʔayy-**u**/***a** rajulin] raʔayta-**hu**. Standard Arabic
 which-NOM/-ACC man-GEN saw-you-him(ACC)
 Lit.: ‘Which man did you see him?’
 ‘Which man did you see?’
 (adapted from Boeckx, 2003a: 49)

We cannot see in the PSST strategy of CVC this particular mismatch of Case, because the language does not have overt Case morphology in the wh-pronoun paradigm; however, in this language, mismatch of ϕ -features is observable, specifically number mismatch, as in the chain [wh_[+PL] ... el_[+SG]].

Boeckx points out that these cases of distant non-agreement are accounted for under a stranding analysis of resumption like his own, since he assumes that A-bar movement is not feature driven (deviating from Chomsky’s Copy Theory of Movement). Therefore, and according to him, the standard base-generation approach to resumption cannot capture those mismatches, assuming that resumptive pronouns and their antecedents are related to each other via binding, “similarly, under a pronounce-a-minimal-copy analysis, non-agreement is unexpected, as copies, by definition, have identical ϕ -features” (op. cit., p. 49).

Boeckx’s (2003a) approach also claims that:

- (131) a. Relative clauses are analyzed within Kayne’s (1994) approach;
 b. Resumption is a case of DP subextraction.

-
- (i) *Case and resumptive-binding operator generalization*
 “‘No resumptive-binding operator can be case-marked’”.
 (id., p. 1)

According to Merchant, it is the presence or the absence of Case marking in the wh-system of a language that determines whether a resumptive pronoun can occur. Being more accurate, if a language has Case alternation in its interrogative and relative pronouns, resumptive pronouns occur when the wh-pronoun does not exhibit Case and they are disallowed when the wh-pronouns are Case-marked.

He assumes explicitly that this generalization applies “especially to operators that are separated from the resumptive pronouns they bind by an island; when no island intervenes [as in (130) in the text], languages differ in whether the resumptive element is actually the spell-out of the trace of movement or not” (op. cit., p. 2).

Merchant believes, however, that the generalization in (i) “supports several strands of evidence that resumptive pronouns inside islands are *not* related to the operators that bind them by movement (*pace* Pesetsky 1998, Boeckx 2002, for example)”.

(132) a. $[_{DP} D/the [_{CP} [that [I T^o [_{VP} read [D [book]]]]]]]$.
 b. $[_{DP} D/the [_{CP} [book]_i [that [I T^o [_{VP} read [t'_i [D t_i]]]]]]]$.
 c. $[_{DP} D/the [book]_i [_{CP} t''_i [that [I T^o [_{VP} read [t'_i [D t_i]]]]]]]$.
 (Boeckx, 2003a: 33)

Let us now see how his analysis would work with CVC relative clauses. A sentence like the one in (133) would receive the structure in (134) (I will only consider the relevant fragment ‘relative clause + antecedent’ – *kes mudjeris ki Zé papia ku-el na festa* ‘the women that Zé talked with him at the party’).

- (134) a. $[_{DP} \text{ kes } [_{CP} \text{ ki } [_{TP} \text{ Zé } T^o [_{VP} \text{ papia } [_{PP} \text{ ku } [_{DP} [_{NP} \text{ mudjeris}]]]]]]]$.
 b. $[_{DP} \text{ kes } [_{CP} \text{ ki } [_{TP} \text{ Zé } T^o [_{VP} \text{ papia } [_{PP} \text{ ku } [_{DP} [_{NP} \text{ mudjeris}]_i \text{ D}^o [t]_i]]]]]]$.
 c. $[_{DP} \text{ kes } [_{CP} [_{NP} \text{ mudjeris}]_i \text{ ki } [_{TP} \text{ Zé } T^o [_{VP} \text{ papia } [_{PP} \text{ ku } [_{DP} [t']_i \text{ D}^o [t]_i]]]]]]$.
 d. $[_{DP} \text{ kes } [_{NP} \text{ mudjeris}]_i [_{CP} [t'']_i \text{ ki } [_{TP} \text{ Zé } T^o [_{VP} \text{ papia } [_{PP} \text{ ku } [_{DP} [t']_i \text{ D}^o [t]_i]]]]]]$.

Some inconsistencies are found in (134), however. If Boeckx assumes that resumptive pronouns and their antecedents are different categories, why is the determiner (*el* in CVC) absent before the movement of the head of the relative clause? Isn't the insertion of *el* (the resumptive pronoun, in Boeckx's terms) after the extraction of the NP an Inclusiveness Condition violation? Is *el* inserted post-syntactically?

Furthermore, the raising analysis of relative clauses in (134) raises several questions⁵⁷. According to this kind of approach, first developed by Vergnaud (1974) and expanded by Kayne (1994) within the LCA framework, the relative CP does not adjoin to the antecedent of the relative clause but it moves up to SpecCP_{rel}. Specifically, Kayne (1994: 86) suggests that the main difference between a nominal complement CP and a relative CP is that the former is selected by a Noun while the latter is the complement of a Determiner. Nevertheless, I will not pursue the task of digging again into the (potential) problems of Kayne's analysis. In fact, some of them, namely the D°/NP agreement, may not be a real issue to wh-questions and relative clauses in CVC if one assumes Bianchi (2002a) proposal (as I did in chap. 4, section 4.3.2.). Focusing on the nominal domain of CVC, and particularly on its bare noun system, Alexandre & Soares (2005) proposed that CVC has a non-split DP structure and that [Number] is a formal feature of D°⁵⁸. Taking this to be correct, it could be argued that N° is underspecified for Nb and that Agree between D° and the head of the NP in SpecCP need (and must) not operate.

Considering now the claim in (131b.), the extraction out of a DP, we must stress, first, that Boeckx's (2003a) proposal does not involve a violation of the Left Branch

⁵⁷ For resumptive relative clauses in EP, Alexandre (2000: 112-113) discusses some topics raised by Kayne's (1994) analysis, namely those in (i), arguing for a reformulation of his proposal.

(i) a. Why does the relativized NP have to move to SpecCP?
 b. How is the categorical connectivity between the antecedent and its trace accounted for?
 c. How is the D°/NP agreement established?
 d. How does Kayne's analysis account for relative clauses with coordinated antecedents and multiple relative clauses?
 e. How is CP_{rel} understood as a relative clause structure proper, with the correct interpretation?
 f. Using the structure [_{DP} D° CP], how can we distinguish a restrictive relative clause from an appositive one?
 g. How does Kayne's proposal account for *quelque* asymmetry in SBJ and DO French relative clauses?

⁵⁸ Following Magalhães (2004) for Brazilian Portuguese, Alexandre & Soares (id., p. 346) assume that, in CVC, DP is a Phase and D° has to be filled, either by a lexical determiner or, in the case of bare NPs, by the noun itself.

Condition (LBC)⁵⁹, because it is a case of DP subextraction from the right branch (i.e. it is the NP complement of the determiner that is extracted out of the big DP domain).

Second, Boeckx argues that “extraction is correlated with the absence of agreement” (p. 43). As the phenomena of extraction out of a DP have been connected to possessor’s extraction⁶⁰, he grounds his argument on the possible extraction of French *combien* ‘how many’ related to the presence of an invariant preposition *de* ‘of’, as in (135).

- (135) Combien Marie a-t-elle écrit [t de livres].
 how.many Marie did.she write of books
 ‘How many books did Marie write.’
 (Boeckx, 2003a: 44)

However, in CVC, sentences with *kantu* ‘how much/many’, which can occur with an invariant preposition, as *kantu di x* in (136b.), do not behave like French *combien de x* with respect to extraction possibilities, as in (137).

- (136) a. **Kantu(*s)** fidjus ki Nhu Palu ten?
 How.many sons that Mr. Palu have(IPFV)
 ‘How many sons does Mr. Palu have?’

 b. **Kantu di** dinheru ki bu tene?
 How.many of money that 2SG have(IPFV)
 ‘How much money do you have?’

⁵⁹ Some DP subextraction cases raise questions on the LBC, as Ross (1967: 114) suggested, saying that certain left-branch specifiers and modifiers in English could not be extracted out of their domain by a transformational operation, as in (i).

Left Branch Condition

- (i) No NP which is the leftmost constituent of a larger NP can be reordered out of this NP by a transformational rule.

⁶⁰ See Miguel (2004: chap. 3) for a developed discussion of this topic in EP and Standard French. Note, particularly, that Miguel (id., p. 267) proposes that the extraction facts are reduceable to the extraction out of a genitive phrase *de* ‘of’, if this *de* phrase is interpreted as the head of the genitive construction, meaning that the moved element must be interpreted as D-linked and is base-generated in the left periphery of the sentence. Miguel (2004: 284) concludes that every possessor’s complement can be extracted out as long as there is no other constituent thematically more prominent that functions as a barrier to that extraction. Her analysis also accounts for the fact that the determiner associated with the possessor imposes its interpretative value to the whole construction, since it c-commands the determiner of its complement (id., p. 347).

(137) a. *[Kantu]_i ki Nhu Palu ten [_{DP} ~~[Kantu]_i~~ fidjus]?

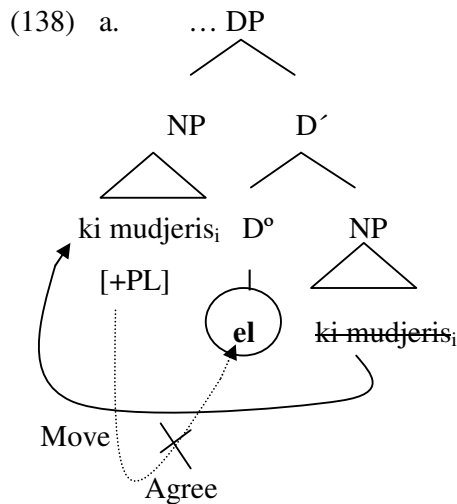
‘*How many does Mr. Palu have sons?’

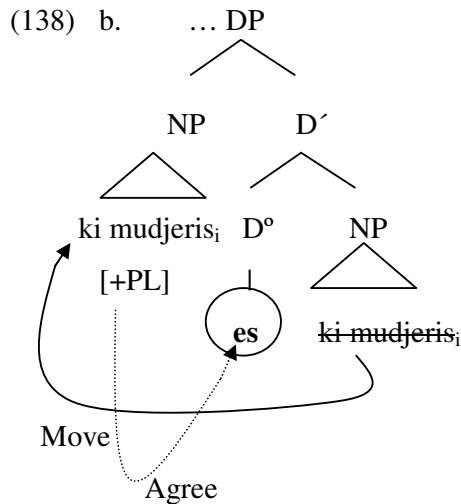
b. *[Kantu]_i ki bu tene [_{DP} ~~[Kantu]_i~~ di dinheru]?

‘*How much do you have of money?’

If we take the wh-structure *kantu fidjus* in (136) to be similar to a possessive one, (as ²*De quem/de que coleccionador viste o retrato?* /Lit.: ‘*Of which collector have you seen the photograph?’, from Miguel, 2004: 335), then the wh-phrase cannot be analyzed as an extraction, because, following Brito’s (1997, ap. Miguel: 336) suggestion, “economy conditions seem to block this sort of movement”, given that there is no (obvious) reason for the movement of the wh-phrase through SpecDP.

Furthermore, the cases under scrutiny in this dissertation ([wh_[+PL] ... el] and [wh_[+PL] ... es] on wh-questions and relative clauses) do not seem to be accounted for by this extraction out of a big DP structure, as partially represented in (138a.), for what I call ‘defective chain’, and in (138b.), for a ‘resumptive chain’.





Observing (138), resumption cases of CVC in (138b.) do not seem to be problematic for Boeckx's proposal, since the [Number] feature of the NP *ki mudjeris* 'which women' in SpecDP agrees with the [+PL] feature of the head of the DP (*es*). However, cases of PSST in CVC, as in (138a.), show an agreement mismatch between the NP *ki mudjeris* in SpecDP and the head of the DP (*el*) and, more important, Boeckx's understanding of resumption (and, specifically, of spelling out copies) is not restrictive enough to provide a justifying explanation for the intimate relation between the occurrence of a spelled out copy (e.g. *el*) and its selection by a preposition. Boeckx's approach cannot either account for the difference between 'defective chains' and 'resumptive chains'.

I must stress, furthermore, that according to Boeckx's analysis of resumption the properties described before for *el* in a PSST construction of CVC are not properties of *el* itself but of the silent wh-variable that occurs in its complement position, and *el* is not the real foot of the wh-chain. In fact, the nontrivial chain of a sentence like (127) above *Ki mininas ki bu papia ku-el na festa?* / Lit.: 'Which girls did you talk to him at the party?' would be (*ki mininas_i ... el_i, ki mininas_i*). This would imply to claim that *el* does not have a wh-variable status after all and that the construction it occurs in is a null gap strategy. And if that conclusion is correct, why doesn't the language display sentences with the co-occurrence of *el* and its complement *ki mininas*?

Summing up Boeckx's (2003a) proposal and its consequences in the analysis of PSST in CVC, I stress the fact that its main advantage over Chomsky and Nunes' accounts is the avoidance of LCA violations, given that Boeckx takes the resumptive pronoun and the head of the nontrivial chain to belong to different categories, the

preposition is no longer preceded by the same element that it precedes, i.e. the preposition precedes *el* or *es* and is preceded by a wh-NP.

Despite this, Boeckx's (2003a) analysis does not account for the fact that *el* of the PSST strategy of CVC (i) is sensitive to syntactic islands (being completely excluded from them in wh-questions and relative clauses), while *es* is not; (ii) is inserted in D° only after movement of its own wh-NP complement, violating the Inclusiveness Condition; (iii) occurs instead of a null gap; and (iv) only occurs when a PP is extracted.

In the next section I will present an analysis inspired by Chomsky (1995b) and Nunes' (2004) approaches⁶¹, and I will argue that it correctly accounts for PSST facts in CVC wh-questions and relative clauses.

5.2.5.2. The mechanism of 'defective copying'

The proposal I will put forward for the PSST strategy in wh-questions of CVC assumes that the spelling out of the foot of a wh-chain of the form (wh_{[+PL]i} ... *el*_{[+SG]i}) is motivated through a mechanism of (wh-)movement that I will call 'defective copying'.

Capitalizing on Nunes' (2004) approach of the Copy + Merge Theory of Movement, I will build my analysis on three main ideas.

Nunes proposes that copies are not different from heads because, according to the null hypothesis, all of them can be phonetically overt (although usually only one of them is phonetically overt because of the LCA). In this sense, when a language allows for the multiple realization of copies, the Copy Theory of Movement leads us to expect that copies have the same phonetic shape as the head of the chain, as in (139a.) but not as the lower copy spelled out in (139b.), in sentences derived by the PSST strategy in CVC.

- (139) a. *[Ki mininus]_i ki bu papia ku [**ki mininus**]_i?
 b. [Ki mininus]_i ki bu papia ku-[**el**]_i?

Taking this into consideration, I claim first that the Numeration is fed by lexical items associated to their strings of formal features, which need to be checked in order for the

⁶¹ In Alexandre (2008), I suggested an account of the PSST strategy based on Boeckx's (2003a) analysis. However, I present now some strong arguments against it, and therefore the analysis I will propose cannot follow Boeckx's view of resumption as stranding.

derivation to converge, along the lines of Pesetsky & Torrego (2004b)⁶². These authors propose a feature sharing perspective of Agree, instead of a ‘feature assignment’, as in (140), and suggest that feature valuation must be separate from its interpretability (against Chomsky, 2001b⁶³).

Agree

(140) “(i) An unvalued feature F (a *probe*) on a head H at syntactic location α (F_α) scans its c-command domain for another instance of F (a *goal*) at location β (F_β) with which to agree.

(ii) Replace F_α with F_β , so that the same feature is present in both locations.”

Taking Agree to operate as in (140), two instances of a certain feature F ⁶⁴ create a link when valued, being accessible to subsequent processes. The direct consequence of this view of Agree is to expand the types of features, as in (141):

*Types of features*⁶⁵

(141) “ **uF val** **uninterpretable, valued** iF val interpretable, valued
 uF [] uninterpretable, unvalued iF [] **interpretable, unvalued**”
 (from Pesetsky & Torrego, 2004b: 5)

Second, I assume that the lower copy that survives in the CVC cases of PSST must receive in the PF component, but not before that stage, a phonological matrix and that is dependent on particular circumstances of the language, namely, the fact that (i) CVC does not allow for preposition incorporation and (ii) C° is filled with a complementizer

⁶² In chap. 2, section 2.5., for the sake of simplicity, I used a system of binary formal features to classify the complementizers of CVC. My goal now is to capture the influence of the features of lexical items in the shape of the syntactic structure.

⁶³ According to Chomsky (id., p. 5), the relation between valuation and interpretability is crucial for Agree to operate, as stated in (i):

Valuation/Interpretability Biconditional

(i) “A feature F is uninterpretable iff F is unvalued”.

Furthermore, he assumes that Delete (a step of the compound operation Move, see (100) in the text above) applies whenever an uninterpretable feature of a lexical item is valued, and Agree consists of deleting uninterpretable features.

⁶⁴ The authors (op. cit., p. 4) say that an ‘instance’ (of F) is used to “refer to a feature-location pair. A feature that has undergone Agree will thus have more than one instance”.

⁶⁵ The boldface features are disallowed in Chomsky’s (2001b) model.

[*u*Cat +D]. Thus, it is naturally expected that in languages that reject PP pied-piping and that simultaneously disallow for preposition incorporation the copy left at the complement position of the preposition must be spelled out, preventing the derivation from crashing⁶⁶.

Third, I will claim that the lower copy must show up (i.e. be spelled out) in the form of an expletive-like 3SG pronoun *el*, as in (139b.), and not in the same form as the head *ki mininus* in (139a.), because the array of formal features of the lower copy is defective at PF, i.e. the set of ϕ -features of the lower copy is ‘reduced’ until it fulfills the preposition needs, being similar to English *it*⁶⁷. Particularly, I recall that Chomsky (1995b: 280) understands the operation Delete to be “invisible at LF but accessible to the computation”, explicitly suggesting a distinction between ‘deletion’ and ‘erasure’ of formal features, which implies to make an element completely inaccessible to any operation, and reformulating the operations of Checking and Deletion as in (142).

Checking and Deletion

- (142) a. “A checked feature is deleted when possible.
b. Deleted α is erased when possible.”

Profiting from such a distinction, I assume that all formal features of the lower copy are checked and deleted, but they are not erased, because they need to be accessible to the computation and the [*u*Cat +D] feature is particularly needed, since it is necessary for the derivation not to crash (it will be noted as [~~*u*Cat +D~~] in order to highlight the fact that it is going to receive a phonological matrix). Therefore, this [*u*Cat +D] feature is still accessible to PF, being spelled out by the default 3SG pronominal form of the language.

Let us take sentence (143) to see how this works, focusing on the relevant steps of a wh-question, in (144).

⁶⁶ In a parallel way, and according to Chomsky (1995b: 288), the reason why languages like English, Icelandic and German have overt expletives rather than *pro* is the Null Subject Parameter and the V-second property.

⁶⁷ Chomsky (1995b: 288) observes that “There is a distinction between expletives that have Case and ϕ -features and the “pure expletives” that lack these features: in English, *it* and *there*, respectively”.

- (143) Ki omis ki Minda papia ku-el?
 which men that Minda talk(PFV) with-3SG
 Lit.: ‘Which men is that Minda talked with him?’
 ‘Which men did Minda talk to?’

(144) a. **Stage 1** – *Numeration*

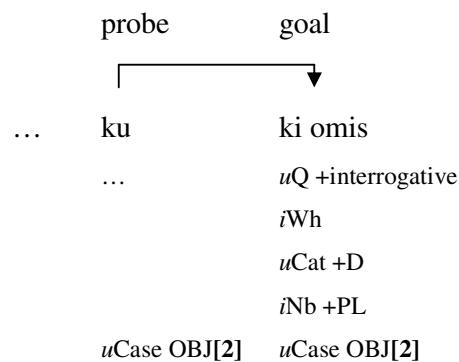
...

[C° ki, *iQ* [], *uWh*⁶⁸, *uCat* +D]

[P ku, *uCase* OBJ, ...]

[_{DP} ki omis, *uQ* +interrogative, *iWh*, *uCat* +D, *iNb* +PL, *uCase* []⁶⁹]

b. **Stage 2** – *Local Agree* ([_{DP} ki omis] values *uCase* as OBJ)



c. **Stage 3** – *DP extraction*

⁶⁸ Against Pesetsky & Torrego’s (2004b) proposal for the complementizer features, I will assume the need to distinguish Q and Wh features, because otherwise, in relative clauses, we would have to claim that it is the head of the relative clause (which is not a wh-phrase) that values C°. Furthermore, along the lines of Pesetsky & Torrego (id.), I will take the Wh feature to have an EPP property.

⁶⁹ Note that the Case feature begins as unvalued because the DP *ki omis* did not establish yet a relation with the preposition *ku* ‘with’.

d. **Stage 4** – *Form Chain*

[_{CP} [Ki omis] ⁱ _j	[_{C°} ki]	[_{TP} Minda papia	[_{VP} [ki omis] ⁱ _j ...
<i>uQ</i> + interrogative	<i>iQ</i> +interrogative		<i>uQ</i> +interrogative
<i>iWh</i>	<i>uWh</i>		<i>iWh</i>
<i>uCat</i> +D	<i>uCat</i> +D		<i>uCat</i> +D
<i>iNb</i> +PL			<i>iNb</i> +PL
<i>uCase</i> OBJ[2]			<i>uCase</i> OBJ[2]

[_{PP} ku	[_{DP} [ki omis] ⁱ _j]]]]
...	<i>uQ</i> +interrogative
	<i>iWh</i>
	<i>uCat</i> +D
	<i>iNb</i> +PL
<i>uCase</i> OBJ[2]	<i>uCase</i> OBJ[2]

=> CH = (ki omis_j, ki omis_j, ki omis_j)

e. **Stage 5** – *Spec-head Agree* ([_{C°} ki] values *iQ* as [+interrogative])

	goal	probe
...	ki omis	C
	<i>uQ</i> +interrogative	<i>iQ</i> []
	<i>iWh</i>	<i>uWh</i>
	<i>uCat</i> +D	<i>uCat</i> +D
	<i>iNb</i> +PL	
	<i>uCase</i> OBJ[2]	

=>

...	ki omis	C
	<i>uQ</i> +interrogative[3]	<i>iQ</i> +interrogative[3]
	<i>iWh</i> [3]	<i>uWh</i> [3]
	<i>uCat</i> +D[3]	<i>uCat</i> +D[3]
	<i>iNb</i> +PL	
	<i>uCase</i> OBJ[2]	

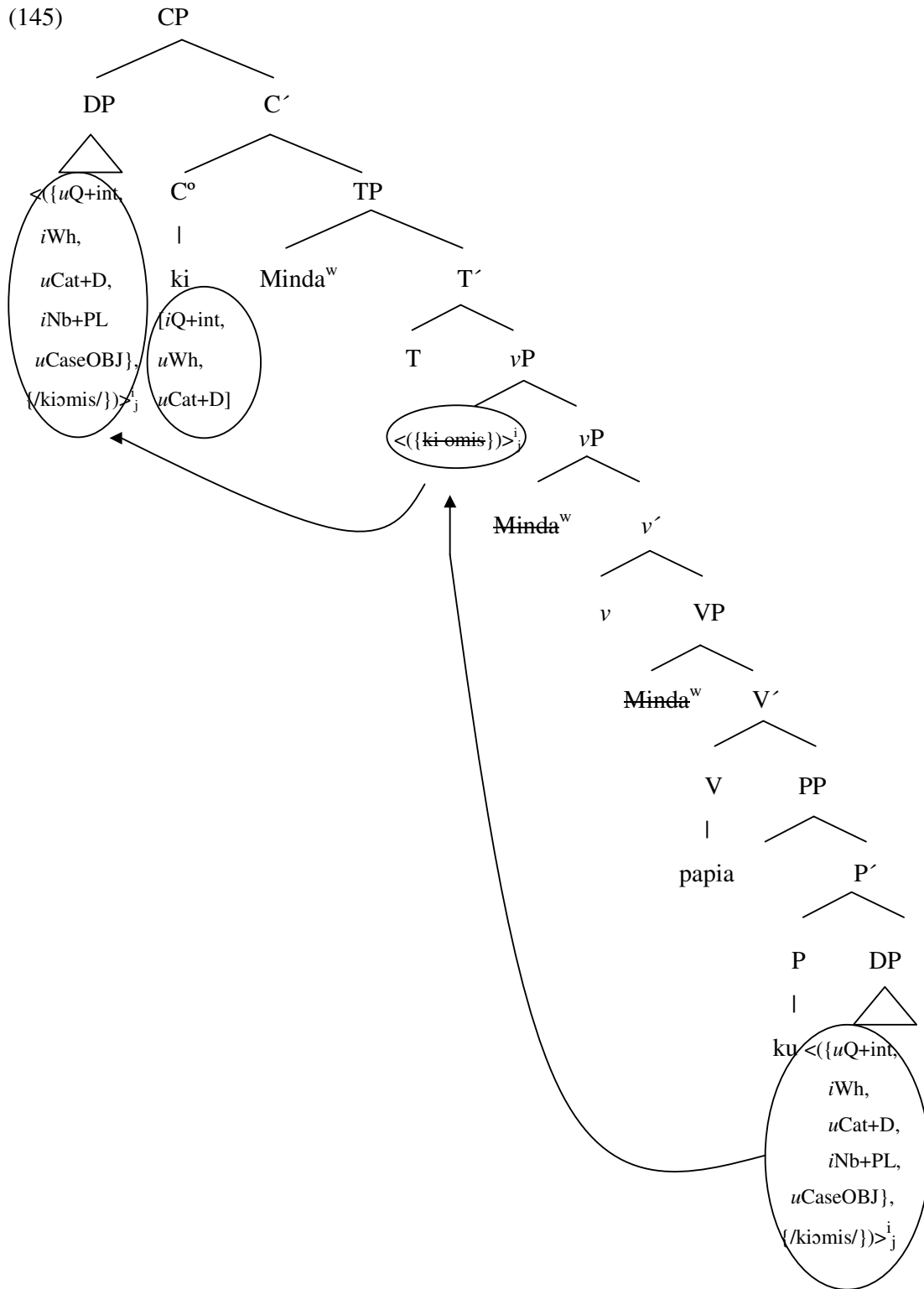
After establishing the needed Agree relations, the instances of a valued occurrence of a given uninterpretable feature⁷⁰ delete and erase (by (142) above). In the lower copy, the features are deleted but not erased, because they need to be accessible to the computation and the [*u*Cat +D] feature is needed for the derivation not to crash, as in (144f.).

f. **Stage 6** – *FF-Elimination and Chain Reduction*

[_{CP} [Ki omis] ⁱ	[_{C°} ki]	[_{TP} Minda papia	[_{VP} [ki omis] ⁱ ...
#Q+interrogative[3]	iQ+interrogative[3]		#Q+interrogative[3]
iWh[3]	#Wh[3]		iWh[3]
#Cat+D[3]	#Cat+D[3]		#Cat+D[3]
iNb+PL			iNb+PL
#Case-OBJ[2]			#Case-OBJ[2]
[_{PP} ku	[_{DP} [ki omis] ⁱ]]]]		
...	#Q+interrogative[3]		
	iWh[3]		
	#Cat+D[3]		
	iNb+PL		
#Case-OBJ[2]	#Case-OBJ[2]		

The derivation of (143) proceeds as represented in (145).

⁷⁰ Pesetsky & Torrego (2004b: 4) suggest that an ‘occurrence’ of a feature is used to “refer to distinct features that might undergo Agree, but have not done so yet. Agree thus takes two occurrences of F and turns them into two instances of F”.



The proposal I make in (144) goes as follows: we observe that in the derivation of a sentence like (143) (*ki omis ki Minda papia ku-el?*) *ki omis* occurs in the Numeration with a bundle of phi-features and Case in the complement position of a PP headed by

the preposition *ku*. At the position it is merged in, *ki omis* locally agrees with the preposition *ku*, which c-commands it, and receives from the preposition the Case it needs: OBJ(ective).

The Numeration also includes a complementizer *ki* that is specified for the interpretable feature Q, valued as +interrogative. As some of the formal features of *ki* are uninterpretable (namely, Wh and Cat), *ki* functions as a probe seeking for an Agree relation with a proper goal. Then, *ki omis* moves up to the next Spec position available with which it can establish an Agree relation: SpecCP. In SpecCP, *ki* and *ki omis* establish a Spec-head Agree relation checking the formal features [Q], [Wh] and [Cat]. At the end of the derivation, at Spell-Out, we end up with the nontrivial chain formed by the sequence of three non-distinct occurrences that are pairs of formal and phonological features of the same element, as in (146).

$$(146) \text{ CH} = \langle (\{uQ+\text{int}, i\text{Wh}, u\text{Cat}+\text{D}, i\text{Nb}+\text{PL}, u\text{CaseOBJ}\}, \{/ki\text{omis}/\})_1, \\ (\{uQ+\text{int}, i\text{Wh}, u\text{Cat}+\text{D}, i\text{Nb}+\text{PL}, u\text{CaseOBJ}\}, \{/ki\text{omis}/\})_2, \\ (\{uQ+\text{int}, i\text{Wh}, u\text{Cat}+\text{D}, i\text{Nb}+\text{PL}, u\text{CaseOBJ}\}, \{/ki\text{omis}/\})_3 \rangle.$$

In order for the derivation to be successfully linearized and converge, FF-Elimination (see (112) above) applies to the nontrivial chain deleting all the formal features and erasing only those that are not necessary to computation. In the lower copy, the formal features are not erased for computation purposes at LF and the [*u*Cat +D] feature is still accessible at PF, satisfying Full Interpretation (which according to Chomsky, 1986b: 98, states that “every element of PF and LF (...) must receive an appropriate interpretation”), as in (147).

$$(147) \text{ CH} = \langle (\{\cancel{uQ+\text{int}}, i\text{Wh}, \cancel{u\text{Cat}+\text{D}}, i\text{Nb}+\text{PL}, \cancel{u\text{CaseOBL}}\}, \{/ki\text{omis}/\})_1, \\ (\{\cancel{uQ+\text{int}}, i\text{Wh}, \cancel{u\text{Cat}+\text{D}}, i\text{Nb}+\text{PL}, \cancel{u\text{CaseOBL}}\}, \{/ki\text{omis}/\})_2, \\ (\{\cancel{uQ+\text{int}}, i\text{Wh}, \cancel{u\text{Cat}+\text{D}}, i\text{Nb}+\text{PL}, \cancel{u\text{CaseOBL}}\}, \{/ki\text{omis}/\})_3 \rangle$$

Since the formal feature [*u*Cat +D] of the lower occurrence is not erased/eliminated, I assume that the lower copy becomes ‘distinct’ from the higher occurrence, because it becomes ‘defective’ with respect to $(\{\cancel{uQ+\text{int}}, i\text{Wh}, \cancel{u\text{Cat}+\text{D}}, i\text{Nb}+\text{PL}, \cancel{u\text{CaseOBL}}\}, \{/ki\text{omis}/\})_1$. Nevertheless, I will not follow Nunes (2004) in assuming that post-syntactic morphological reanalysis allows for the linearization (and spell out) of the

lower link, because his approach implies that the lower copy moves, adjoining to another head. In my understanding of the PSST/’defective copy’ strategy in CVC, the lower copy does not move and it is not an X^0 , and therefore it cannot be reanalyzed along with the preposition *ku* as a single unit⁷¹. I claim instead that the lower occurrence (*ki omis*) is post-syntactically converted into *el*, which is the default pronominal form available in CVC to phonologically express the defective chain link ($\{u\text{Cat} + D\}$). I must stress also that *el* does not violate the Inclusiveness Condition because it is not a new lexical item inserted in the the course of the derivation. *El* must be treated as the phonetic lifeguard of the preposition that was left stranded in a wh-construction. In fact, *el* must not be considered the output of a ‘decomposition’ operation, i.e. a piece of ‘ornamental’ Morphology. Embick & Noyer (2007: 305) suggest that ‘ornamental’ morphemes “merely introduce syntactico-semantically unmotivated structure and features which “ornament” the syntactic representation”. As shown so far, *el* does not introduce syntactic or semantic structure into the derivation, being only the phonological reflex of syntactic conditions on wh-movement. But *el* can be treated as a product of Impoverishment. According to Embick & Noyer (2007: 311), in the DM framework and for the declension of weak adjectives in Old English, “the effects of Impoverishment are usually seen when in some particular circumstance a category fails to exhibit the expected exponent but instead exhibits a default exponent”.

The operation Chain Reduction applies, linearizing the nontrivial chain $CH = \langle (\{uQ+int, iWh, uCat+D, iNb+PL, uCaseOBL\}, \{/kiomis/\})_1, (\{uQ+int, iWh, uCat+D, iNb+PL, uCaseOBL\}, \{/kiomis/\})_2, (\{uQ+int, iWh, uCat+D, iNb+PL, uCaseOBL\}, \{/kiomis/\})_3 \rangle$ in accordance with the LCA, not targeting the lower copy because this one is now a copy distinct from the head. Thus, the preposition *ku* is c-commanded by the category $\{uQ+int, iWh, uCat+D, iNb+PL, uCaseOBL\}, \{/kiomis/\}$, and c-commands $\{uCat + D\}$, and the derivation of sentence (143) succeeds yielding the nontrivial chain with two spelled out copies $CH = \langle (\{uQ+int, iWh, uCat+D, iNb+PL, uCaseOBL\}, \{/kiomis/\})_j, (\{uCat+D\})_j \rangle$.

Note furthermore that sentences like (148), involving ‘heavy’ prepositions as *na ladu* ‘next to’, add further support in favor of this pronominal complement, since the

⁷¹ The morphological reanalysis suggested by Nunes (2004) to save derivations with multiple spell out of copies is interpreted as Fusion in the Distributed Morphology (DM) framework (cf. footnote 45 above). See also Magro (2007) for a developed overview on DM theory applied to cases of interpolation (non-adjacency between a proclitic and a verb) in contemporary EP dialects.

language allows for a *pro* after this kind of prepositions⁷². That means that not only Case but also a [+D] feature must be present.

- (148) Nhos buska nhos bendera papaia dentu [di merkadu]_i
 2PL search(PFV) POSS.2PL seller papaya inside of market
 di Platô. Mas oxi e sta **na ladu** [*pro*]_i.
 of Platô. But today 3SG be(IPFV) in side
 ‘You searched for your papaya seller inside Platô’s market, but today she is
 next to it’.

The behavior of ‘heavy’ prepositions, dispensing with PSST strategy, may be viewed as a ‘blocking effect’⁷³ of feature [*u*Cat +D] survival. The more complex the heads are the more constrained the availability of morphological conversion is.

It is also clear, and it must be highlighted, that *el* is a true copy (i.e. it is the output of the operation Move, as Copy + Merge, having the nature of a wh-variable) and is post-syntactically inserted driven by strict syntactic and phonological requirements of the language. In the light of this proposal, I suggest now a reformulation of *el*’s definition given in (32) above.

Defective copy (formal definition)

- (149) *el* is a **defective copy** if it is
- (i) an underspecified/expletive pronoun post-syntactically inserted in the complement position of a preposition, and
 - (ii) the foot of a nontrivial chain ($\alpha_{[uWh]i} \dots el_i$).

The correct interpretation of the chain (*ki omis_i, el_i*) is obtained because LF has access to all the features of the foot of the chain ([*u*Q +interrogative, *u*Cat +D, *i*Nb +PL, *u*Case OBJ]), and therefore it is possible to compute. I will call this kind of syntactic object ‘defective chain’. A ‘defective chain’ is the chain that involves a defective copy, which is at the foot of a nontrivial wh-chain.

⁷² See chap. 3 on this topic, where it was shown that, in CVC, ‘heavy’ prepositions are the only ones that allow for a Preposition Stranding strategy (without a spelled out copy, as in English).

⁷³ The ‘blocking effect’ is also present in other constructions that involve morphological reanalysis. See, for instance, Vigário (1999), for postlexical pronominal cliticization in EP, and Martins (2007), for double realization of verbal copies in EP emphatic affirmation.

As a direct consequence of my analysis of the PSST strategy, the defective copy theory of (wh-)movement does not have range over wh-questions inside syntactic islands, where *el* can never occur if the antecedent is [+PL]. In those particular cases, a 3PL inflected pronoun form (*es* ‘them’) is required.

The goal of the next section is to show that these two pronominal forms (*el* and *es*) are the product of two distinct wh-strategies, namely, PSST (or ‘defective copying’) and resumption. In order to achieve this purpose, we have to investigate other wh-constructions where *es* can occur outside syntactic islands, as relative clauses in CVC.

5.3. Resumption in CVC

The phenomenon of resumption is common to many, unrelated, languages. In fact, in the past thirty to forty years, this strategy has been documented on relative clauses in Celtic languages (such as Irish and Welsh), Creole languages (as Haitian, Kriyol, Papiamentu, Santome, and Saramaccan), Germanic languages (as Zurich German), Modern Greek, Niger-Congo languages (namely, Kru languages, as Vata and Gbadi), Romance languages (as Spanish and (informal) Portuguese), Scandinavian languages (as Swedish), Semitic languages (such as (varieties of) Arabic, and Hebrew), and Slavic languages (as Polish), just to name a few⁷⁴.

In the (relatively large) literature on resumptive pronouns, they have been quite difficult to define in a theoretically sound manner and the term typically means that a pronoun occurs where a gap might occur.

Asudeh (2004: 5-6)⁷⁵ compiles several definitions found in the literature of the eighties and nineties, such as those in (150):

The concept of ‘resumptive pronoun’

(150) “(definition 1)

A resumptive pronoun is a pronoun that occurs where a gap might otherwise occur.

⁷⁴ See footnote 46 above on this chapter for the references.

⁷⁵ Within the framework of Lexical Functional Grammar and Glue Semantics, this author develops a theory of resumption based on semantic composition, specifically, on ‘resource sensitivity’.

(...) (definition 2)

A resumptive pronoun is a pronoun that occurs at the foot of an unbounded dependency.

(...) (definition 3)

A resumptive pronoun is a pronoun that is operator bound.

(...) (definition 4)

A resumptive pronoun is a pronoun that is operator bound at S-structure”.

As Asudeh (*id.*, p. 8) puts it, the definitions above are not sufficient, because none of them:

- “1. Relates resumptive pronouns to gaps.
2. Properly distinguishes resumptive unbounded dependencies from unbounded dependencies with gaps.
3. Relates resumptive pronouns to copy raising pronouns.
4. Properly distinguishes the relationship between the antecedent and the resumptive in an unbounded dependency from the relationship between the antecedent and the pronoun in copy raising”.

In the previous sections of this chapter, we have seen that outside islands contexts wh-questions of CVC involve a ‘defective copy’ *el* when a PP is questioned. As it was shown, this pronominal element *el* is a crucial piece of ‘defective chains’⁷⁶, since it is the (phonetic) foot of the chain it occurs in motivated by specific requirements of the language.

Based on further CVC data, I will propose that this language provides us some good piece of evidence for assuming two different kinds of pronominal syntactic objects: ‘resumptive pronouns’ and ‘defective copies’, the product of two distinct wh-strategies: resumption and PSST/‘defective copying’, respectively.

The properties of *el* were presented in (26) above and discussed along the lines of section 5.2. The main goal here is to show that the pronominal element that occurs in constructions derived through the resumptive strategy – *es* – is associated to the following set of properties:

⁷⁶ The term ‘defective chain’ may be a misleading one because, in fact, the chain has more overt material than it should have (namely, *el*, where we would expect for a null gap). Despite this, I intend to maintain this concept since I believe it captures the fact that a ‘defective copy’ occurs in it. In other words, a ‘defective chain’ is the chain whose foot position is filled by an overt ‘defective copy’.

(151) a. This pronoun is always the complement of a preposition that selects and Case-marks it, that is why it cannot occur in SBJ and DO positions (cf. (152)-(153)).

b. Morphologically, it is always a 3rd person pronoun, agreeing in number with its antecedent, i.e. it is a variable pronoun assuming the form *el* (3SG) ‘him/her/it’ or *es* (3PL) ‘them’, according to the number marking of the head of the chain.

c. Syntactically, it is obligatorily in islands contexts, be it part of a wh-question or member of a relative clause (cf. (154a. and b.)). Outside island contexts, the resumptive strategy is only possible in relative clauses, as in (155).

(152) *[_{DP/SBJ} Ki mininus]_i ki [es]_i atxa pursor na Sukupira?
 which boys that 3PL find(PFV) teacher in Sukupira
 ‘*Which boys did they found the teacher at Sukupira market?’

(153) *[_{DP/OD} Ki mininus]_i ki Djon odja-[s]_i na sinema?
 which boys that John see(PFV)-3PL in cinema
 ‘*Which boys did John see them in the cinema?’

Adjunct Island

(154) a. [Ki amigus]_i ki bu bai Fransa ku Maria
 which friends that 2SG go(PFV) France with Maria
 [_{CP} sen papia ku-[es/*el]_i]?
 without talk with-3PL/3SG
 Lit.: ‘Which friends is that you went to France with Maria without talking with them?’
 ‘Which friends did you go to France with Maria without talking with?’

Table 3. Occurrence of PSST and Resumption in CVC w.r.t. syntactic islands

		Wh-questions		Restrictive relative clauses	
		Outside islands	Inside islands	Outside islands	Inside islands
Wh-movement	Yes	PSST (<i>el</i>)		PSST (<i>el</i>)	
	No		Resumption (<i>el/es</i>)	Resumption (<i>el/es</i>)	Resumption (<i>el/es</i>)

Another topic to be addressed here is the fact that the ‘defective copy’ *el* can be misjudged as the resumptive pronoun *el*. Particularly, if morphological agreement is a way of distinguishing them, whenever the head of the chain is [+SG] we face a dilemma, since the surface form is the same, regardless the syntactic environment (cf. (157), for wh-questions and (158), for restrictive relative clauses).

- (157) a. [_{DP} Kenha]_i ki bu ka kre pa nu gosta d’[**el**]_i?
 who that 2SG NEG want(IPFV) for 1PL like(IPFV) of-3SG
 Lit.: ‘Who don’t you want us to like him?’

Complex NP island

- b. [_{DP} Kenha]_i ki dja bu atxa [_{DP} un omi
 who that already 2SG find(PFV) a man
 [_{CP} ki papia ku-[**el**]_i]]?
 that talk(PFV) with-3SG
 Lit.: ‘Who did you find a man that talked with him?’

- (158) a. [_{DP} [Kel mesa]_i [_{CP} ki Djon po jaru riba d’[**el**]_i]]
 DET table that Djon put(PFV) jar over of-3SG
 tene pé kebradu.
 have(IPFV) foot brake.PASS
 Lit.: ‘The table that Djon put the jar over it has a broken leg.’

Wh-island

- b. [DP [Kel bar]_i] [CP ki Djon purgunta na Sukupira
DET bar that Djon ask(PFV) in Sukupira
[CP ken/kenha ki kunpra pastel di midju na [el]_i]] dja fitxa.
who that buy(PFV) pasta of corn in 3SG already close(PFV)
Lit.: ‘The bar that Djon asked at Sukupira who bought the corn pasta in it is closed.’

Some scholars have also noted the same facts for other languages, as Muysken (1977) for Papiamentu and Adesola (2005), for Yoruba⁷⁷.

According to Muysken, sentences “involving a plural relativized noun, demonstrate the invariability of the PRO [pronominal] element, in contrast to “normal” pronouns, which are distinguished according to number” (cf. (159)).

- (159) [DP [E hombernan]_i] [CP ku mi amigu ta bai merka Papiamentu
The man-PL that my friend ASP go market
{ku[né]_i/*kunan}] ta di Korsow.
{with-3SG/*with-3PL} be from Curaçao.
(adapted from Muysken, 1977: 86)

Adesola refers that, in Yoruba⁷⁸ clefts, the foot of the chain must be an invariable pronominal form, as only (160b.) shows, while in relative clauses a variable pronoun must occur at the foot of the chain when the antecedent is [+PL] (cf. (161b.)).

⁷⁷ This is a Benue-Congo language, mainly spoken in Nigeria.

⁷⁸ It is interesting to note that, in CVC, cleft sentences also seem to be more proximal to wh-questions than to relative constructions, i.e. in non-islands contexts, clefts involve a PSST/‘defective copy’ strategy, disallowing resumption (cf. (i)-(ii), respectively).

(i) Ê [bo]_i ki N sa ta papia ku [el]_i.
Be 2SG that 1SG PROGR talk with 3SG
Lit.: ‘It is you that I am talking with him.’
(Brüser & Santos, 2002: 129)

(ii) Omi ka ta papia ku mininu, e [mudjeris]_i ki omi ta papia
Man NEG IPFV talk with boy be women that man IPFV talk
ku-el/*es.
with-3SG/*3PL
Lit.: ‘Men don’t talk with boys, it is women that men talk with him’.

(160) a. **Olá** ni Op Ø **ó** ra isu. Yoruba

Ola be C **3s** buy yam

‘It was Ola who bought yams’

b. **Olá** **ati** **Adé** ni [CP Op_i Ø [IP **ó** [VP t_i [VP ra isu]]]]

Ola and Ade be C **3s** buy yam

‘It was Ola and Ade who bought yams’

(161) a. **Olá_i** ni Adé n’ ná léhín t_i’ Ojó bébé fún **un_i**

Ola be Ade PROG beat after COMP Ojo plead for him

‘Ola was the person who Ade beat after Ojo had pleaded for him’

b. [**Aíná** **ati** **Olá_i**] ni Adé n’ ná léhín t_i’ Ojó bébé fún **wón_i**

Aina and Ola be Ade PROG beat after COMP Ojo plead for **them**

‘Aina and Ola were the people who Ade beat after Ojo had pleaded for them’

(adapted from Adesola, 2005: 81-83)

As Merchant (2004: 2) refers, while investigating the relationship between resumptive pronouns and wh-operators, “when no island intervenes, languages differ in whether the resumptive element is actually the spell-out of the trace of movement or not”.

Considering these facts, we need more instruments to cut the line between the two pronominal elements. We will see that the presence vs. absence of wh-movement will be a crucial issue for the distinction between the ‘defective copy’ *el* and the resumptive pronoun *es*.

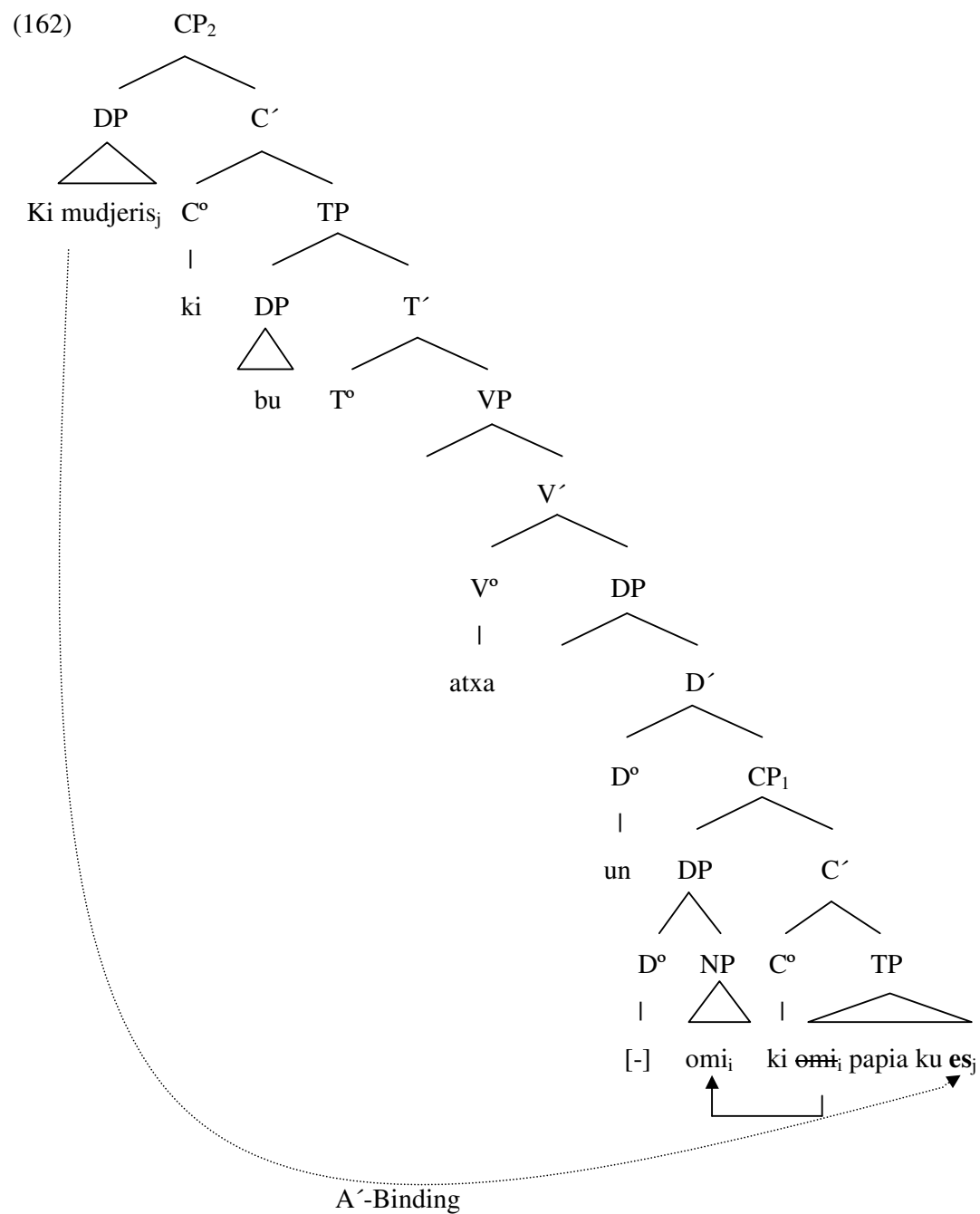
5.3.1. Defective chains vs. resumptive chains

The properties of defective chains were discussed in section 5.2., considering the nature of the ‘defective copy’ *el* that they involve and their wh-movement character.

In this section, I will confront resumptive chains, arguing in favor of a base-generation approach of resumption, and departing away from Boeckx’s (2003a) analysis of resumption as stranding.

As it was presented before, the resumptive strategy is available for wh-questions only within syntactic islands contexts (see examples (4)-(6) in section 5.1.). Sentence

(5), for instance, will be derived as in (162)⁷⁹, yielding the nontrivial wh-chain (*ki mudjeris_i, es_i*).



⁷⁹ Recall from chap. 4 (section 4.3.2.) that I am assuming here Bianchi's (2002a) head raising analysis of relative clauses.

In (162), the wh-phrase *ki mudjeris* ‘which women’ comes from the Lexicon as an operator⁸⁰ and is directly merged in SpecCP2, since SpecCP1 is already occupied by *omi* and the complement position of the preposition *ku* is filled with a 3PL pronoun *es*⁸¹. In this position, *ki mudjeris* checks the [*uWh*] feature of the topmost complementizer *ki* and A'-binds the resumptive pronoun *es*. In this case, the chain (*ki mudjeris*_i, *es*_i) is formed by A'-binding and not by A'-movement (contrary to the proposal made for PSST/‘defective copy’ strategy).

Someone could argue that the resumptive pronoun occurring in wh-questions of CVC is really an ‘intrusive pronoun’⁸², since it is used to ‘save’ the construction from an island violation. However, restrictive relative clauses of CVC elucidate the kind of resumption that the language displays: in relative clauses, *es* is a genuine resumptive pronoun because it can occur outside islands. In fact, when a PP outside an island is relativized, there are two possible strategies available: PSST, in (163), and resumption, in (164).

- (163) [_{DP} [Sais konsetu operasional]_i] [_{CP} ki N sa ta ben tráta d[**el**]_i].
 six concept operational that 1SG PROGR come deal of-3SG
 Lit.: ‘Six operational concepts that I have been dealing with it.’
 ‘Six operational concepts that I have been dealing.’
 (Silva, 2005: 180)

⁸⁰ Wh-words are termed ‘operators’ because they are able to determine the reference set of a variable in their scope, in the sense of universal and existential quantifiers.

⁸¹ To assume that resumptive pronouns are present in the initial Numeration, being independent categories, may account for languages like Modern Arabic (cf. (i)), which have obligatory resumptive pronouns that show up in the sentence with a Case distinct from the head of the relative clause that it doubles. Note that a theory that takes the resumptive pronoun to be the spelled out copy of the head cannot explain these facts straightforwardly.

(i) Al-kitāb-āni -lladāni katabtu-humā. Modern Arabic
 The-books-DUAL.NOM REL.DUAL.NOM.M I.wrote-them.ACC
 Lit.: ‘The two books that I wrote them.’
 ‘The two books that I wrote.’
 (adapted from Kremers, 2003: 68)

⁸² Sells (1984) was the first to coin this term, distinguishing it from ‘true’ resumptive pronoun. An ‘intrusive pronoun’ occurs in languages that do not have resumptive pronouns (as English, in (i)), and one of its main characteristics is the fact that it does not receive a bound interpretation (as an ordinary resumptive pronoun would do).

(i) Which of the linguists do you think that if Mary hires him then everyone will be happy?
 (Sells, 1984: 13, ap. Asudeh, 2004: 109)

- (164) [DP [Kes mudjeris]_i [CP ki Djon paxona pa-[es]_i]]
 DET women that Djon fall.in.love(PFV) for-3PL
 imigra pa Portugal.
 immigrate(PFV) to Portugal
 Lit.: ‘The women that Djon fell in love for them immigrated to Portugal’.
 The women that Djon fell in love for immigrated to Portugal’.

In written data, it is also very frequent to find ambiguous cases of PSST or resumption in relative clauses, as it was already recorded by Adolfo Coelho in the late 19th century (cf. (165)⁸³) and in contemporary texts, as (166).

- (165) En rêcêbê [DP [carta di nhô]_i, [CP qu’in fica
 1SG receive(PFV) letter of mister that-1SG stay(IPFV)
 munto contente con [êl]_i]].
 very happy with 3SG
 Lit.: ‘I received a letter from you, Sir, that I was very happy about it.’
 (adapted from Coelho, 1967: 9)⁸⁴

- (166) Na Résa, ta pididu pa [DP [difuntu]_i
 in Pray IPFV ask.du to deceased
 [CP ki sa ta fasedu Résa pa [el]_i]].
 that PROGR do.du Pray for 3SG
 Lit.: ‘At the Pray, one asked for the deceased that the Pray was done for him.’
 (Silva, 2005: 403)

In the past few years, the literature on resumption has paid more attention to the distinct manifestations of the phenomenon across and within languages, which led to alternative theoretical views on the topic (cf. table 2. in section 5.2.5. above).

It is now commonly assumed that there must be different kinds of resumption, essentially because of those elements that appear at the foot of the wh-chain that is

⁸³ Note that, although A. Coelho presents examples like this one, he doesn’t notice the difference between this particular strategy of relativization and a null gap strategy, for instance.

⁸⁴ It is interesting to note that Coelho (1880/1967: 5) referred that the examples given by him were “written by educated people that talk Portuguese well, but that know well the ‘crioulo rachado’” (my translation).

outside a syntactic island. In fact, McCloskey (2006: 111) observes that “resumptive pronouns outside islands are formed by movement, but those inside islands are not. It follows in turn that both mechanisms (movement and base-generation) must be available within the same language, and the fact that the two outcomes are formally indistinguishable becomes very puzzling”.

The goal here is to unpuzzle McCloskey's observation. In part, we may legitimately assume that many of the so called 'resumptive pronouns' that can only occur outside islands are 'defective copies', in the sense of the one treated so far for CVC. Therefore, they are only superficially undistinguished, instead they exhibit different behaviors, as we will see below.

Trying to account for the variation manifested in Welsh relative clauses, which may involve (besides the movement strategy) base-generation combined with Agree (as in (167)), and base-generation alone (exclusive of syntactic islands), Rouveret (2008: 169) says that Agree should be followed by Move whenever possible and that it is cyclic, i.e. it applies phase by phase. Therefore, phases function as a central notion on Rouveret's approach, since they establish the locality of movement.

- (167) Y dyn y siaradasoch chwi ag ef. Welsh
the man C spoke you with him
‘The man that you spoke with.’
(Rouveret, 2008: 170)

According to Rouveret (*id.*), it is phasal agreement that explains the existence of sentences with gaps and resumptive constructions in the grammar of a given language. For instance, in (168) the lower clitic is a resumptive one while the intermediate clitic (absent in standard Welsh) is an agreement marker that spells out the phi-features of the relativized element.

- (168) Beth yr ydych chi yn ei ddisgwyl i mi ei wneud.
 what C are.you PROG CL expect for me CL do
 ‘What do you expect me to do?’
 (written Welsh, from Harlow, 1981: 252, ap. Rouveret, 2008: 173)

Rouveret also suggests that the difference between the ‘gap’ relative clauses and resumptive relatives is related to the nature of the complementizer, proposing the following working hypothesis:

- (169) “The link between the resumptive pronoun and the periphery results from the operation Agree, triggered by the presence of “active”, uninterpretable features on the relative C and on the pronoun” (Rouveret, op. cit., p. 172)

According to this author, Agree is not followed by Move in resumptive relatives and C⁰ bears an interpretable feature [*i*Rel] that encodes the relative status of the clause and “the same feature is found on resumptive pronouns, where it is clearly uninterpretable” (ibid.). But Rouveret’s (2008) analysis of resumptive relatives implies that “we find morphological manifestations of the agreement relations postulated between the successive phasal heads” (id., p. 173), as in (168) above, and this is not found in languages like CVC (recall that CVC employs the same complementizer – *ki* – in both interrogative and relative clauses).

I suspect that the asymmetric Subjacency behavior of Welsh and Irish resumptive relative clauses (the first showing reconstruction effects outside islands and the second exhibiting no subjacency effects) highlight the fact that what has been called ‘resumptive’ relative clauses in Welsh are, in fact, ‘defective copy’ constructions (probably very similar to CVC), while Irish displays only (‘pure’) resumption.

The variation exhibited by Hebrew relative clauses also led Sharvit (1999: 591) to propose that “resumptive pronouns have a dual nature. In some aspects they are like traces, in others like ‘regular’ pronouns”. The author assumes that whenever the resumptive pronouns behave like ‘regular’ pronouns, “they are not subject to Bounding constraints”, and “in some sense they have less freedom of interpretation, compared to traces”. Hebrew data do not seem to be very consensual, though. Naama Friedmann (p.c.) does not accept resumptives in *wh*-questions in Hebrew⁸⁵, contrary to Sharvit’s judgments, whereas resumptive pronouns are obligatory in (DO and IO) relative clauses (cf. (170) and (171)).

⁸⁵ Borer (1981) and Sells (1984, ap. Asudeh, 2004) do not also accept resumptive pronouns in Hebrew *wh*-questions.

(170) ^{OK}/*[Eyze student]_i nifgaSta [PP **ito**]_i?⁸⁶ Hebrew

which student you-met with-3SG

‘Which student did you meet with?’

(171) a. Ele [ha-sarim]_i she-ha-nasi ra'a [DP/DO **otam**]_i.

be DET-ministers that-DET-president see 3PL

Lit.: ‘These are the ministers that the president saw them.’

b. Ele [ha-sarim]_i she-ha-nasi diber [PP/IO **itam**]_i.

be DET-ministers that-DET-president talk to-3PL

Lit.: ‘These are the ministers that the president talked to them.’

(Naama Friedmann, p.c.)

Because of this ‘chaos’ in resumption data, Bianchi (2002a) distinguishes three types of resumptive pronouns⁸⁷: optional, as in (172), obligatory as in (173), and intrusive pronouns, as in (174).

(172) O livro que eu deixei (**ele**) aqui BP

DET book that 1SG leave(PFV) 3SG here

na mesa desapareceu.

in.DET table disappear(PFV)

‘The book that I left (it) here on-the table disappeared.’

⁸⁶ Sharvit (1999) refers that this sentence only occurs in colloquial Hebrew when the questioned element is D-linked. Whenever a who-question is involved, such as (ia.), a resumptive pronoun is excluded, as in (ib.).

(i) a. Im mi nifgaSta --? Hebrew
With who you met

b. *Mi nifgaSta **ito**?
Who you-met with-him
‘Who did you meet with?’

⁸⁷ Asudeh (2007) also discusses three kinds of resumption:

(i) Class 1 – Base-generated resumptives, exemplified by Irish, Hebrew, varieties of Arabic, etc.
(ii) Class 2 – Movement resumptives, represented by Swedish and Vata.
(iii) Class 3 – Processor resumptives, as in English.

- (173) O sobrinho que a Maria vai deixar BP
 DET nephew that DET Maria go(IPFV) leave
 todo o dinheiro dela pra ***(ele)**.
 all DET money of-POSS.3SG to 3SG
 ‘The nephew that Maria will leave all the Money of-her to ***(him)**.’

- (174) The guy who I hate almost everything **he** does.
 (all adapted from Bianchi, 2002a: 76)

Based on these sentences, Bianchi (id., p. 77) concludes that in all cases “resumptive pronouns are not independent lexical items merged in the argument position, but they are the spell-out of the referential index on the lowest link of the chain”, and that in the case of obligatory resumptive pronouns (the kind we find in CVC) they are forced by condition stated in (175):

- (175) “Inherent Case must be spelled out”.
 (Bianchi, 2002a: 96)

The importance of the requirement in (175) is more visible in languages with overt Case marking, like Polish (cf. Borsley, 1997) and Russian (cf. Kayne, 1994).

Polish has obligatory resumptive pronouns if the DP relativized has an inherent Case, as in (176a.), although resumptive pronouns are excluded if the relativized DP bears Nominative or Accusative Case, as in (176b.).

- (176) a. On spotkal- studenta co ***(mu)** on dal- piatke. Polish
 he met student that him-DAT he gave good mark
 b. Ten samochód, co Janek (***go**) widzial-wczoraj, zniknal.
 the car-NOM that Janek it-ACC saw yesterday disappeared
 (Bianchi, 2002a: 96)

Coming back to CVC facts, we observe that resumption outside islands is available only when PPs are relativized, irrespective of their grammatical function (cf. (177)-(180)).

This seems to respect Bianchi's (2002a) requirement on the overt manifestation of inerent Case.

- (177) *[_{DP} Kes omi_i ki [_{DP/SBJ} es]_i sa ta papia
 DET man that 3PL PROGR talk
 ku médiku] kebra karu.
 with doctor break(PFV) car
 ‘*The men that they were talking with the doctor broke the car’.
- (178) *Maria atxa [_{DP} kes mininu_i ki bu odja-[_{DP/DO} s]_i]
 Maria find(PFV) DET boy that 2SG see(PFV)-3PL
 na sinema.
 in cinema
 ‘*Maria found the boys that you saw them at the cinema’.

- (179) Djon atxa [_{DP} kes mudjeris_i ki Zé papia
 Djon find(PFV) DET women that Zé talk(PFV)
 [_{PP/OBLNucI} ku-[es]_i] na festa].
 with-3PL in party
 Lit.: ‘Djon found the women that Zé talked with them at the party’.

- (180) N ka ta konxe [_{DP} kes skola_i ki Maria ta trabadja
 1SG NEG IPFV know DET school that Maria IPFV work
 [_{PP/OBLAccess} n’[es]_i]].
 in-3PL
 Lit.: ‘I don’t know the schools that Maria works in them’.
 ‘I don’t know the schools that Maria works in’.

However, CVC does not allow for the resumptive strategy to apply to manner or reason adjuncts, as in (181) and (182)⁸⁸.

⁸⁸ In a Phase-based approach, we have to consider the edge of vP as the escape hatch for a constituent to be accessible to further operations. However, it is irrelevant for me to show that Phase here and, therefore, I will not represent it.

Wh-Island

- (181) *[_{CP} [_{Modi}_i ki Zé purgunta-u diretamente [_{CP} kenha ki
how that Zé ask(PFV)-2SG directly who that
komporta [_{AdvP} si]_i]]?
behave(PFV) like.this
‘*How did Zé ask you directly who behaved like this?’

- (182) *[_{DP} Kes [_{CP} razon_i ki Pedru fla-m ma el fuji
DET reason that Pedru say(PFV)-1SG that 3SG run.away
[_{PP/OBLAccess} pa [es]_i]]] e ka lijítimu.
for 3PL be NEG legitimate
‘*The reasons that Pedru told me that he run away for them are not legitimate’.

This fact is also consistent with what has been recorded for other languages, and according to Boeckx (2003a: 37) there are no resumptive pronouns of true adjuncts because “(true) adjuncts never participate in ϕ -feature checking”⁸⁹.

Furthermore, PP pied-piping in relative clauses is forbidden, irrespective of the preposition involved, as (183) shows.

- (183) a. *Djon atxa kes mudjeris **ku kenha** Zé papia na festa.
Djon find(PFV) DET women with who Zé talk(PFV) in party
‘Djon found the women with whom Zé talked at the party.’

b. *Kel mesa **riba di ki** Djon po jaru tene pé kebradu.
DET table over of which Djon put(PFV) jar have foot break.PASS
‘The table over which Djon put the jar has a broken leg.’

The fact that PP pied-piping is excluded from restrictive relative clauses, contrary to its complementary distribution with PSST/‘defective copy’ strategy in wh-questions (cf. (85) above), constitutes evidence for considering relative clauses a less permissive environment for movement. In fact, it was shown before that, inside islands, the

⁸⁹ Rullmann (1995) argues that only arguments may be D-linked, while true adjuncts are not tied to any particular lexical item’s semantic interpretation. Tutunjian & Boland (2008: 12) also show that “the psycholinguistic evidence supports a formal distinction between arguments and adjuncts” and assume that “argument knowledge is specified in the lexical entry of the head, while adjunct knowledge is not”.

resumptive pronoun *es* behaves differently from the ‘defective copy’ *el* (see (35), (42) and (44) above).

Outside islands, the resumptive pronoun *es* also behaves like a ‘true’ pronoun (see (184) below) and not as a wh-spelled out copy (i.e. a variable), since it does not license parasitic gaps, as in (185).

- (184) N ka odja [DP [kes mininu femia]_i ki Djon paxona
 1SG NEG see(PFV) DET boy female that Djon fall.in.love(PFV)
 pa [Coord [es]_i y pa tudu kes mudjeris ki ta badja sabi]].
 for 3PL and for all DET women that IPFV dance well
 Lit.: ‘I didn’t see the girls that Djon fell in love for them and for all the women
 that dance well’.

- (185) *[DP [Kes faka]_i [CP ki nu konsigi abri porta ku-[es]_i]]
 DET knife that 1PL can(PFV) open door with-3PL
 [CP sen nu rabenta *pg*] e rei di prigos.
 without 1PL break be very of dangerous
 Lit.: ‘The knives that we opened the door with them without breaking are very
 dangerous.’

Therefore, and based on CVC data, a resumptive pronoun must then be defined as in (186):

Resumptive pronoun (formal definition)

- (186) *p* is a **resumptive pronoun** if it
- (i) is an agreeing/variable pronoun (at least in number and in some languages in gender);
 - (ii) occurs in a construction whose C° is [*uWh*] (phonetically overt, as in CVC, or not), and
 - (iii) occurs in a nontrivial chain [α_i C°_{[*uWh*]] ... *p*_{*i*}].}

I conclude that, in CVC, restrictive relativized PPs are subject to two different strategies, yielding two distinct chains. One of them results from a PSST/‘defective copy’ strategy, involving movement of the DP head to SpecCP_{rel} and spelling out, at PF

and in the form of an expletive-like pronoun *el*, the surviving formal feature [*u*Cat+D] of the lower copy in the complement position of a preposition.

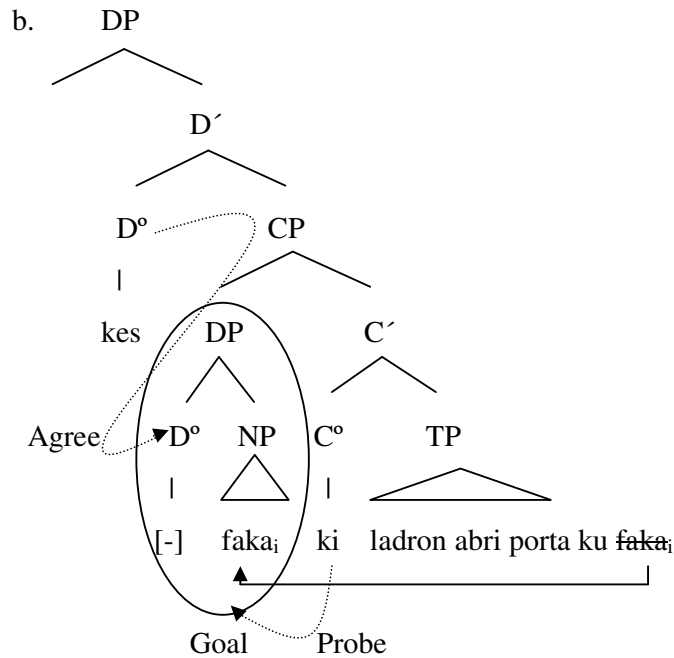
The other is the output of a resumptive strategy and then no *wh*-movement is at stake, in the flow of the classic analysis of resumption. In this case, the head of the relative clause is merged in SpecCP_{rel}, motivated by the fact that C° is filled with an uninterpretable formal feature [*u*Wh] that must be checked, and from there A'-binds the resumptive pronoun, which occurs in the initial Numeration and is merged in PP complement position.

Sentence (187) exemplifies the strategies involved in PP restrictive relativization.

- (187) a. N tene [kes faka ki ladron abri porta ku-**el**].
 1SG have(IPFV) DET knife that thief open(PFV) door with-3SG
- b. N tene [kes faka ki ladron abri porta ku-**es**].
 1SG have(IPFV) DET knife that thief open(PFV) door with-3PL
 Lit. for both: 'I have the knives that the thief opened the door with it/them'.

The derivation of the relative clause in (187a.) will procede as in (188), assuming Bianchi's (2002a) head raising analysis and abbreviating superfluous steps.

- (188) a. *Numeration*
- ...
- [C° ki, *i*Q [], *u*Wh, *u*Cat +D]
- [P ku, *u*Case OBJ, ...]
- [DP faka, *i*Q [], *u*Wh, *u*Cat +D, *i*Nb [], *u*Case []]



The nontrivial wh-chain resulting from derivation (188) is $(faka_i, el_i)$ and, as claimed before for this strategy when applied to wh-questions, the ‘defective copy’ *el* does not belong to the initial Numeration, being inserted post-syntactically as the output of the phonological spell out of the defective lower link ($\{uCat+D\}$).

The derivation of the relative clause in (187b.) follows as in (189):

(189) a. *Numeration*

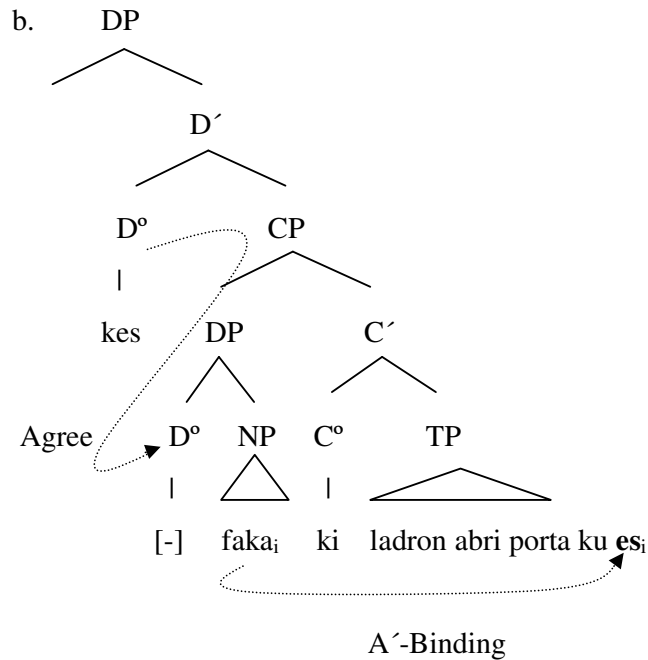
...

[_C ki, *iQ* [], *uWh*, *uCat* +D]

[_{DP} faka, *iQ*, *uWh*, *uCat* +D, *iNb* [], *uCase* []]

[_P ku, *uCase* OBJ, ...]

[_{DP} es, *uCat* +D, *iNb* +PL, *uCase* []]



The nontrivial wh-chain ($faka_i, es_i$) formed by the resumptive strategy is the output of Merge alone and the resumptive pronoun *es* is part of the initial Numeration. The head of the relative clause values its iNb [] as $iNb + PL$ from the external D° (*kes*), through local Agree, C° probes for its [iQ [], uWh] features with the goal DP *faka* in SpecCP (which is also [iQ [], uWh]) and an A'-binding relation ensured by the DP in SpecCP gives the resumptive pronoun *es* the reference it needs. Since there is no wh-movement involved, the inability of *es* to license parasitic gaps is explained straightforwardly.

Thus, a 'resumptive chain' is distinct from a 'defective chain' in that is the result of Merge and its foot is initially filled with a resumptive pronoun. Furthermore, in 'resumptive chains', there is a perfect Match between the head and the foot (the resumptive pronoun) of the nontrivial chain and an A'-binding relation takes place.

The distinct properties of 'resumptive' and 'defective' chains are resumed in table 4.

Table 4. Defective versus resumptive chains

	Defective chains	Resumptive chains
Agreeing forms ($wh_{[PL]i}$, es_i)	*	✓
‘true’ pronoun	*	✓
Licensing parasitic gaps	✓	*
Principle C effects	✓	*
Sensitivity to islands	✓	*

Aoun et al.’s (2001) observation that resumptive elements outside islands originate ‘apparent resumption’, while resumptive elements inside islands yield ‘true’ resumption, must be reformulated: if my proposal proves to be correct, at least for *wh*-questions, ‘apparent resumption’ is really the ‘defective copy’ strategy. As I referred above in this chapter, it is probable that in the literature on resumption the two strategies have been misunderstood and tangled.

5.4. Summary

This chapter focused on a specific discontinuous object that *wh*-questions and restrictive relative clauses exhibit in CVC, namely, [$wh_{[+PL]} \dots el$]. I began by saying that this object seemed to be the output of a ‘pronominal’ strategy (in order to distinguish it from the null gap strategy and the resumptive strategy), and ended up calling it ‘defective copy’ strategy, based on its properties and similarities to *wh*-chains with null copies.

In section 5.2.1., I showed that the object [$wh_{[+PL]} \dots el$] occurs in other (Creole) languages, as Santome, Angolar, Papiamentu, Haitian, Jamaican, a.o., and questioned whether it is the product of a subtype of resumption or an autonomous strategy. In order to reach a satisfactory answer, the distribution of *el* was considered, evaluating its sensitivity to (*wh*-)movement. In this section, we saw that *el* behaves as a variable in the narrow syntax, licensing parasitic gaps and exhibiting sensitivity to Strong Crossover effects. I also argued that the PSST strategy involves *wh*-movement because it is sensitive to long and successive-cyclic movement, behaving in a similar fashion to the null gap strategy. CVC proved to be a language with strong requirements on locality

conditions not allowing for PP long movement in a weak island context, being an asymmetry with Subject and Direct Object extraction out of weak islands.

In section 5.2.2.2. I argued that PP pied-piping and PSST are alternative strategies in the *wh*-questions of CVC, but P-stranding with a null gap and PSST are in complementary distribution. Based on the distinct nature of the pronominal forms selected by prepositions and by verbs and on the possibility of adjunct extraction with the PSST strategy, I suggested that CVC rejects P-stranding with a null gap because it disallows preposition incorporation, not licensing the null gap. Furthermore, when *wh*-questions and relative clauses in CVC are introduced by an overt complementizer [*u*Cat +D] *ki*, PP pied-piping is rejected.

In section 5.2.3., Chomsky's (1995b) Copy Theory of Movement was briefly reviewed focusing on the fact that it cannot account for the PSST strategy of CVC, since the foot of this chain is spelled out in the form of *el*, when it should be deleted, and the spelled out foot is not a (perfect) copy of the head, which violates the Inclusiveness Condition.

In section 5.2.4., I presented some refinements of Chomsky's copy theory introduced by Nunes' (2004) Copy + Merge Theory of Movement. However, Nunes' proposal still excludes the possibility of spelling out the foot of a nontrivial chain, based on linearization requirements and the morphological reanalysis that accounts for multiple (intermediate) copies in German and Romani, for instance, it cannot explain the occurrence of *el* at the foot of a *wh*-chain in CVC.

In section 5.2.5.1., some aspects of Boeckx's (2003a) stranding analysis of resumption were discussed and some inconsistencies lead us to find it incapable of accounting for PSST in CVC, namely, the fact that the properties of *el* identified in section 5.2.1. are not properties of *el* itself but of the silent *wh*-variable that occurs in its complement position; and the fact that it cannot distinguish 'defective chains' from 'resumptive chains'.

In section 5.2.5.2. I put forward my own proposal of a 'defective copying' mechanism based on three main ideas: (i) the Numeration is fed by lexical items associated to their strings of formal features, which need to be checked in order that the derivation converges; (ii) the lower copy must receive in the PF component a phonological matrix and that is dependent on particular circumstances of the language (namely, impossible preposition incorporation and C° filled with a complementizer [*u*Cat +D]); (iii) the lower copy is spelled out as an expletive-like 3SG pronoun *el*,

given that the array of formal features of the lower copy is ‘reduced’ until it fulfills the preposition needs. In fact, my proposal of ‘defective’ copy resembles that of Bianchi’s (1999/2002a), according to which the lowest link of an A’-chain can be ‘shrunked’, i.e. not deleted and visible at the LF component.

In section 5.3., I tried to show that the classic analysis of the phenomenon of resumption is still accurate and accounts for this strategy in relative clauses outside islands as well as in wh-questions and relative clauses inside islands. This nontrivial chain results from Merge and forms an A’-binding chain whereas a ‘defective chain’ is made out of Move (Agree/pied-piping/merge). I also showed that these two syntactic objects [$wh_{[+PL]} \dots el$] and [$wh_{[+PL]} \dots es$] have been systematically tangled as if they were varieties of the same strategy while they exhibit distinct properties and, thus, must be accounted for separately.

The conclusion I reached was that, in CVC, PSST is an autonomous strategy that involves wh-movement and that is not a subtype of resumption. Therefore, *el* is not an invariable resumptive pronoun, but is a ‘defective’ copy since it is the phonological counterpart of a survival feature [$uCat +D$], which is required by the preposition that selects it in order to the derivation converge. Thus, ‘defective chains’ do not exhibit the same set of properties of ‘resumptive chains’.

6. Conclusions

In this chapter, I present a synthesis of the research findings reported in this dissertation and I also address some issues left for further research.

6.1. Synthesis of the research findings

With this research I hope to have shown that Creoles in general and CVC in particular are not ‘simple’ or ‘(morphologically) poor’ languages. Nevertheless, much more work needs to be done, focusing on distinct grammar components of these languages, in order to show that “the joint investigation of language contact, language change, and language acquisition suggests that there is not, or could be, any theoretical divide between the outcome of language change vs. that of creolization” (DeGraff, 2003: 402).

In what follows, I will review the specific findings of each of the four chapters.

Chapter 2 aimed to present a general overview of those aspects of the syntax of CVC that interact with the *wh*-constructions under research in this dissertation. In what concerns the functional structure of the clause in CVC, I showed that subject-verb (SV) is the typical word order in CVC, although the language allows for VS with unaccusative and copula verbs, and focused on the issue of verb movement. Reviewing Baptista’s (2002) and Pratas’ (2007) proposals for V-to-T and absence of V-movement, respectively, I suggested that CVC has no verb movement because of the word order between the verb and adverbs, floating quantifiers and negation markers. Given the fact that the copula verb *e* ‘to be’ in the Present tense form is the only one that precedes the negation marker *ka*, I accounted for that order saying that *e* is merged in T°, spelling out the [Present] feature of T and occurring in a copulaless construction. I conclude this part by claiming that CVC behaves in a very similar way to English, since it shows evidence for projecting a functional node NegP between TP and VP (more precisely, between TP and AspP) and the verb stays in V°, except for the Present tense form of the copula *e*.

With respect to the pronominal system of CVC, I assumed the tripartite pronominal paradigm proposed by Pratas (2004) and showed that verbs and prepositions select for different pronominal complements (clitic and nonclitic forms), which must indicate that they assign to their complements distinct Cases. In this section, I also showed the distribution of the wh-elements displayed by CVC and focused on the fact that the co-occurrence of the complementizer *ki* with wh-constituents such as *ken/kenha* ‘who’, *kusé* ‘what’ and *ki N* ‘which N’ is obligatory because this [+Wh] complementizer requires a Spec-head Agree relation with an appropriate XP, in order to check its formal features. Concerning the DP structure of CVC, I claimed that [Number] was a formal feature of D°, while [Gender] was lexically marked, and that the language has developed a definite article (*kel(s)*) from the demonstrative *kel(s) ... lilla* (as already proposed by Baptista, 2002 and 2007, and Alexandre & Soares, 2005). At the end of this chapter, I suggested that a Split-CP analysis was not needed to account for wh-questions and relative clauses in CVC, against Obenauer (2008) and Pollock’s (2008) proposals. In a minimalist spirit, I showed that using five formal features to specify C° (namely, [±D, ±V, ±Q, ±Wh, ±T]) was enough to explain the distribution of the complementizers found in the language (*di* ‘of’, *ki* ‘that’, *ma* ‘that’, *pa* ‘for’, *pamodi* ‘to/Ø’, *si* ‘if’ and Ø). This analysis of the complementizer system of CVC allowed me to highlight the fact that *ki* is the only one that attracts wh-DPs to its Spec position, probing for the [+D, +Wh] features. This topic is of great importance, since it tells us how the language is specified for clausal typing, as it was addressed in chapter 3.

Chapter 3 introduced the reader to the several types of wh-question strategies that CVC exhibits. First, I set apart strategies involving movement of the wh-element (e.g. null gap, with and without pied-piping, preposition stranding with a spelled out trace – PSST – and P-chopping) from those that do not require the operation Move (or internal Merge), such as resumption and wh-in-situ. Four main conclusions can be drawn out from the data: (i) all the wh-fronting strategies are alternatives to each other; (ii) PSST, P-chopping and resumption only operate over PPs; (iii) resumption yields grammatical outputs only within syntactic islands, and (iv) wh-in-situ is freely allowed in root contexts (receiving an ‘echo’ or a ‘real’ question interpretation), but there is a great deal of variation in the grammaticality judgments of in situ wh-questions in embedded contexts.

Second, I reviewed the arguments for an analysis of wh-in-situ constructions as involving (i) covert (LF) movement, and I concluded that (wh-)movement should not be

accounted for by a component in which certain principles and conditions are inactive; (ii) remnant movement, where I claimed that, on one hand, it could not satisfy linearization requirements at Spell-Out, in violation of the LCA, and, on the other hand, wh-in-situ questions do not necessarily receive an ‘echo’ reading and, thus, do not need to project an AssertiveP; (iii) no wh-movement at all, where I assumed Brody’s (1995) proposal of interpreting chains at LF (not categories); and (iv) clausal typing, which I considered to capture the behavior of wh-constructions in CVC.

Third, I argued for two clausal typing processes for CVC wh-questions. Particularly, when C° is filled with the complementizer *ki*, C° is ambiguous ($[\pm Q, \pm Wh]$) and needs to be disambiguated by a wh-operator in SpecCP, with which it agrees in a strictly local relation. Whenever C° is specified for $[+Q, +Wh]$, through a null complementizer \emptyset merged in C° , it is unambiguous and its checking domain is not strictly local, A’-binding the wh-in-situ.

The first part of Chapter 4 investigates the relativization strategies that CVC exhibits, such as null gap, PSST, P-chopping and resumption, reaching the conclusion that, contrary to wh-questions, restrictive relative clauses in CVC do not allow for PP pied-piping and, therefore, PSST, P-chopping and resumption are the only strategies involved when a PP is relativized. It was also noted that CVC displays no relative pronouns in this particular kind of relative clauses, and all of them are introduced by the complementizer *ki*. I further noticed that, contrary to what was described for wh-questions, resumption occurs not only inside syntactic islands but also outside them, being an alternative to PSST and P-chopping. The distinction between the three is that PSST and P-chopping are the output of a Move (Merge/Agree/Attract) operation, while the resumptive strategy comes only from Merge/Agree (C° probes for a wh-goal merged in SpecCP), A’-binding the resumptive pronoun merged in the complement position of the relativized PP.

The second part of the chapter focused on the structure of restrictive relative clauses. I evaluated two of the most recent proposals: Platzack’s (2000) analysis of a relative CP embedded in the complement position of N° , and Bianchi’s (2002a) raising analysis (inspired in Kayne, 1994). The conclusion I reached was that Platzack’s proposal cannot adequately distinguish nominal complement clauses from restrictive relatives and, therefore, should be rejected. Instead, I adopted Bianchi’s $[_{DP} D^\circ CP]$ proposal, considering that the head of the relative clause raised to SpecCP is an indefinite DP whose D° is null and that the spelling out of a chain link is associated with

the structural position it occupies ruled by a PF constraint. Specifically, the foot of an A'-chain can receive a phonological matrix if it occupies an argument position A'-bound by the DP in the Spec position of the relative CP. However, Bianchi's (2002a) analysis proved to be unable to distinguish nontrivial chains that are the output of PSST and resumption. Because of this, the chapter ends with the suggestion that the derivation of a resumptive restrictive relative clause does not involve Move of the DP head to SpecCP, being merged there instead, and resumptive pronouns are autonomous categories that occur in the initial Numeration.

Chapter 5 presents the analysis I suggested to account for wh-questions and restrictive relative clauses formed by the PSST/'defective copy' strategy, distinguishing it from the process of resumption. In order to argue for such proposal, I began by saying that the discontinuous object [wh_[+PL] ... *el*] seemed to be the output of a 'pronominal' strategy (a priori setting it apart from resumption) and that it shared many properties of the wh-chains with null copies.

In the first sections of chapter 5, the distribution of the pronominal element that occurs at the foot of a wh-chain (*el*) was considered showing that it behaves like a null syntactic variable in the narrow syntax, because it licenses parasitic gaps and exhibits Strong Crossover effects. I also showed that the PSST strategy involves wh-movement because it is sensitive to long and successive-cyclic movement, just like null gaps are. Furthermore, I noticed that PSST only occurred with PPs and that CVC rejects P-stranding with a null gap, because it disallows for preposition incorporation and allows for adjunct extraction, and rejects PP pied-piping when wh-questions and relative clauses are introduced by an overt complementizer [*uCat* +D] *ki*.

In a second part of Chapter 5, first, I reviewed Chomsky's (1995b) Copy Theory of Movement, focusing on the fact that it cannot account for the defective copy strategy of CVC, because it entails that the foot of this chain cannot be spelled out in the form of *el*, i.e. it should be deleted, and the spelled out foot *el* violates the Inclusiveness Condition, being a (non-perfect) copy of the head. Second, I presented Nunes' (2004) Copy + Merge Theory of Movement, showing that it still excludes the possibility of spelling out the foot of a nontrivial chain, based on linearization requirements and morphological reanalysis, not being able to explain the occurrence of *el* at the foot of a wh-chain in CVC. Third, some aspects of Boeckx's (2003a) stranding analysis of resumption were discussed and some inconsistencies lead us to find it unable of accounting for defective copy in CVC, because the properties of *el* would not be the

properties of *el* itself but of the silent wh-variable that occurs in its complement position. I also rejected Boeckx's approach because it cannot distinguish 'defective chains' from 'resumptive chains'.

The discussion of all these analyses, led me to propose a 'defective copying' mechanism according to which the formal features of the lexical items present in the Numeration need to be checked in order that the derivation converges, and, because the language does not allow for preposition incorporation and C° is occupied by a complementizer [*u*Cat +D], the lower copy must receive in the PF component a phonological matrix. That phonological matrix corresponds to an expletive-like 3SG pronoun *el* because the array of formal features of the lower copy was 'shrunked' to the minimum possible and is still visible at PF (along the lines of Bianchi's, 2002a, analysis).

At the remainder of Chapter 5, I showed that the analysis of resumption as a non-movement process correctly accounts for this strategy inside islands. Therefore, I claimed that the 'resumptive chain' is the product of Merge and involves an A'-binding relation between the fronted wh-element or head of the relative clause and the resumptive pronoun.

The conclusion I reached was that, in CVC, the defective copy strategy only applies to PPs, being an independent process that involves wh-movement and that is not a subtype of resumption.

6.2. Further research

In this dissertation, I explored the syntax of wh-questions and restrictive relative clauses in CVC with the ultimate goal of getting a better understanding of the architecture of a specific type of 'doubling', namely, the preposition stranding with a spelled out trace (PSST) strategy, which I renamed 'defective copy', distinguishing it from resumption. Based on CVC (variety of Santiago, Santa Catarina district), I arrived at a reasonable coherent picture of the properties of the defective copy and resumptive strategies mentioned above.

Arguments for the mechanism of defective copying should not only come from careful language internal analyses, but also from crosslinguistic variation. Indeed, if structural variation between languages is minimal, the structures motivated for CVC

should extend directly to wh-constructions with this kind of ‘doubling’ in other languages.

The fact that CVC wh-questions and relative clauses were an understudied topic makes it a fertile ground for further research, embracing related topics or going even beyond. Since the research I conducted in this dissertation raises some other questions, I present below a non-exhaustive list, pinpointing some trends of future research that I intend to pursue.

(i) Crosslinguistic comparison

The proposal I put forward in this dissertation predicts that the defective copy strategy can only apply to PPs. Such a prediction is also supported by the fact that languages like EP exhibit ‘pseudo-resumptive’ constructions, which, according to Fontes (2008) and Valente (2008), involve a resumptive pronoun with the grammatical relation of IO, OBL or GEN, that is, contexts in which the relativized constituent is a PP, as in (1) and (2).

- (1) Eu escrevi uma composição sobre aquela menina EP
 1SG write(PFV).1SG a story about that girl
de que a televisão já falou muito **nela**.
 of that the television already talk(PFV).3SG very in.3SG
 Lit.: ‘I wrote a story about the girl of which the t.v. already talked a lot about her.’
 (adapted from Fontes, 2008: 90)

- (2) A Margarida comprou um carro **ao qual** penso
 the Margarida buy(PFV).3SG a car to.the which think(IPFV).1SG
lhe terem roubado a antena ontem.
 (to.)it have.3PL steal the antenna yesterday
 Lit.: ‘Margarida bought a car to which I think someone stole the antenna from it yesterday’.
 (adapted from Valente, 2008: 76)

In non-restrictive relative clauses, the resumptive strategy is much more pervasive than in restrictive relatives, because resumption is possible in SBJ and OBJ constructions, as in (5b.)-(7b.), and works as an alternative strategy to the null gap one, as illustrated in (5a.)-(7a.).

- (5) a. [_{DP} Nhu padri_i, k' [_{DP/SBJ} --]_i ta fla tudu dretu], sta na bar.
 POSS.1PL priest that IPFV say every right be in bar
 'Our priest, who speaks well, is at the bar'.

b. [_{DP} Nhu padri, k' [_{DP/SBJ} e]_i ta fla tudu dretu], sta na bar.
 POSS.1PL priest that-3SG IPFV say every right be in bar
 Lit.: 'Our priest, that he speaks well, is at the bar'.

- (6) a. [_{DP} [Djon ku Maria]_i, ki mai di Pedru
 Djon with Maria that mother of Pedru
 odja- [_{DP/DO} --]_i na sinema], (es) fuxi di kasa.
 see(PFV) in cinema 3PL run.away(PFV) of house
 'Djon and Maria, who the mother of Pedru saw at the cinema, run away from home'.

b. [_{DP} Djon ku Maria]_i, [_{CP} ki mai di Pedru
 Djon with Maria that mother of Pedru
 odja- [_{DP/DO} s/*I]_i na sinema], (es) fuxi di kasa.
 see(PFV)-3PL/3SG in cinema 3PL run.away(PFV) of house
 Lit.: 'Djon and Maria, that Pedru's mother saw them/*him at the cinema, run away from home'.

- (7) a. [_{DP} Anos_i, ki Djon da- [_{DP/OBJ1} --]_i si disku nobu],
 1PL that Djon give(PFV) POSS.3SG disk new
 nu ta bai konsertu.
 1PL IPFV go concert
 'We, to whom Djon gave his new CD, we are going to the concert'.

b. [DP Anos_i, ki Djon da-[DP/OBJ1 **nu/*-l**]_i si disku nobu], ...
 1PL that Djon give(PFV)-1PL/3SG POSS.3SG disk new
 Lit.: 'We, that Djon gave us his new CD, we are going to the concert'.

Furthermore, resumption in appositive relative clauses is an alternative to the defective copy strategy in PP relativization contexts, as in (8).

- (8) [DP [Mai ku tia di Maria]_i, ki Djon papia [PP ku-[**es/el**]_i]
 mother with aunt of Maria that Djon talk(PFV) with-3PL/3SG
 na festa], es sa ta purpara kasamentu.
 in party 3PL PROGR prepare marriage
 Lit.: 'The mother and aunt of Maria, that Djon talked with them/him at the party,
 they are planning the marriage'.

Summing up, the fact that appositive and restrictive relative clauses behave alike in relation to the alternation between defective copy and resumption in PP relativization, while resumption of relativized DPs in appositive relatives is possible, is a piece of evidence in favor of the resumption and the defective copy strategies distinct nature. It highlights the non wh-movement nature of resumption and its independence from PP pied-piping or preposition incorporation restrictions.

With respect to the behavior of free relative clauses in CVC, there is evidence suggesting that these constructions are closely related to the (embedded) wh-questions¹, e.g. they use the same wh-words, as (9) and (10) illustrate.

Free relative clause

- (9) [DP/SBJ Ø [CP **Ken/kenha**_i ki [~~ken~~]_i konxe Maria]] sabe
 who that know Maria know(IPFV)
 m'e ta kanta dretu.
 that-3SG IPFV sing right
 'Whoever knows Mary knows that she sings well.'

¹ See, e.g., Rooryck (1994), who presents several arguments in favor of a bare CP structure of free relatives based on this similarity.

Embedded wh-question

- (10) Bu purgunta-m [_{CP} **ken/kenha**_i ki [~~ken~~]_i papia
2SG ask(PFV)-1SG who that talk(PFV)
ku nha pai].
with POSS.1SG father
'You asked me who talked with my father.'

This suggests that free relatives cannot be just a subset of headed relative clauses; otherwise we would expect them to be introduced by exactly the same class of elements, and headed relative clauses (restrictive and appositive) are only introduced by *ki* 'that'.

Another interesting fact about free relative clauses is that the defective copy strategy is not excluded from them, as (11) shows.

- (11) N ta konsigi bádja mórna so ku [_{DP} [_{CP} **kenha**_i ki
1SG IPFV can dance morna only with who that
N gosta d'[el]_i]].
1SG like(PFV) of-3SG
Lit.: 'I can dance 'morna' only with who I like him.'
'I can only dance 'morna' with who I like.'
(Brüser & Santos, 2002: 474)

However, in free relatives it is more difficult to distinguish the defective copy strategy from resumption, because the foot of the chain must be always a 3SG pronominal form, since the head (*kenha* in (11) above) is also [Nb: +SG]. Nevertheless, I will take Bianchi's (2002a: 80) observation, according to which she has "not found a language that allows for optional resumptive pronouns in maximalizing relatives", as a clue for the presence of the defective copy strategy, against resumption, in languages that behave like CVC. Moreover, the fact that the wh-word *undi* 'where' does not allow for the defective copy strategy, as the ungrammaticality of (12) shows, argues for the possible occurrence of defective copying in this construction.

- (12) *[_{DP} [_{CP} **Undi**_i ki nu ta bibi n' [**el**]_i]] ka ten
 where that 1PL IPFV live in-3SG NEG have(IPFV)
 agu di tubu.
 water of pipe
 ‘*Where we live in it doesn’t have running water.’

In the same way as free and restrictive relative clauses, semi-free² and non-finite relatives of CVC also seem to resort to the defective copy strategy to derive the relativization of a PP, as in (13) and (14), respectively.

- (13) [_{DP} **Kusa** [_{CP} ki nu debe ten grandi orgudju na **el**]]
 thing that 1PL should have(IPFV) big pride in 3SG
 é kiriolu.
 be Creole
 Lit.: Thing that we should have big pride in it is Creole
 ‘What we should be proud of is Creole.’
 (Silva, 1998: 109)

- (14) Djon ka ten [_{DP} **un pisa/ningen**_i [_{CP} p’e
 Djon NEG have(IPFV) a person/nobody for-3SG
 papia [_{PP/OBL} ku-**[el]**]_i].
 talk with-3SG
 Lit.: ‘Djon hasn’t a person/nobody for him to talk with him.’
 ‘Djon has nobody to talk to. / Djon has nobody that he can talk with.’

As briefly shown supra, other types of relative clause formation seem to support a distinction between the defective copy strategy and resumption, but further research is needed.

² The term was coined by Smits (1988, ap. De Vries, 2002: 43) and, in CVC, reports to relative clauses whose antecedent is expressed by the noun *kusa* ‘thing’ (a pro-N form that lexicalizes the semantic feature [-Animate]) or by the determiner *kel* + empty N.

(iii) Other types of wh-constructions

This dissertation is mainly focused on the defective copy strategy in wh-questions and (restrictive) relative clauses of CVC. However, this strategy is not an idiosyncrasy of those constructions. In fact, the language displays other ‘doubling’ strategies, which strengthen the kind of ‘doubling’ approach of the defective copy strategy, as (15) and (16) illustrate.

- (15) **Ami N** ka ta papia ku mininu runhu.
1SG 1SG NEG IPFV talk with boy bad
Lit.: ‘I, I do not talk with bad boys.’

- (16) **Maria ku Tareza, N** odja-s na sinema.
Maria and Tareza 1SG see(PFV)-3PL in cinema
‘Maria and Tareza, I saw them at the cinema.’

Cleft sentences, which involve the same complementizer of wh-questions and restrictive relative clauses – *ki*, also seem to display a strategy similar to the one reported by Fontes (2008) and Ventura (2008) for EP (cf. (1)-(2) above), as the possibility of PP pied-piping co-occurring with a P + pronoun (3PL) in (17) stresses.

- (17) **E ku mudjeris-la** ki omi papia (**ku-es**).
be with women-DIST that man talk(PFV) with-3PL
Lit.: ‘Is with those women that the man talked with them.’
‘It was with those women that the man talked.’

(iv) Acquisition of wh-constructions

Having analyzed the strategies of wh-interrogation and relativization available in CVC adult speakers, another research topic for the future is to see how children acquire these structures. Assuming the analysis of Soares (2003 and 2006) for EP, it would be interesting to know whether C°, in CVC, is active since the first stages of language acquisition.

In particular, it would be interesting to study the acquisition of relative clauses in CVC because my analysis of the ‘defective copy’ and resumptive strategies entails that the application of Move to PPs is more complex than the application of Move to DPs and that the latter is more complex than the application of Merge, as expressed in the scale of (18).

Accessibility to Move

(18) Merge > Move DPs > Move PPs

Taking Soares (2003) to be correct, when saying that the data relating to the acquisition of the CP domain in EP sustain her claim that the emergence of different syntactic structures are determined by the complexity of the syntactic computation, we would expect to find in CVC a similar pattern: first, emergence of resumptive relative clauses, second, defective copy structures and at last wh-questions involving PP pied-piping.

Such research on relative clause formation of CVC would probably confirm previous works, such as Labelle (1996 and references therein), who suggested that French-speaking children do not move a lexical wh-element to SpecCP in order to derive relative clauses, even though this is the obligatory strategy for standard adult French in the case of oblique relativization sites. According to Labelle, French children resort to a complementizer in clause-initial position and, optionally, to a resumptive pronoun, as in (19).

(19) Celle-là que le papa **lui** montre un dessin. French (JF 5 ;00)
 That one that the father to her is showing a drawing
 ‘The one to whom the father is showing a drawing.’
 (Labelle, 1996: 65)

Broadening the scope, it will be interesting to see whether this scale of accessibility to Move expands over other (A/A’-)movement domains (along the lines of the work done by Friedmann & Levi, 2006, for Hebrew children).

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